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IN THIS ISSUE

Summary of Defects Among Men Drafted in the World War
New Pneumococcus Crossing With Five Recognized Strains



FEDERAL SECURITY AGENCY
UNITED STATES PUBLIC HEALTH SERVICE

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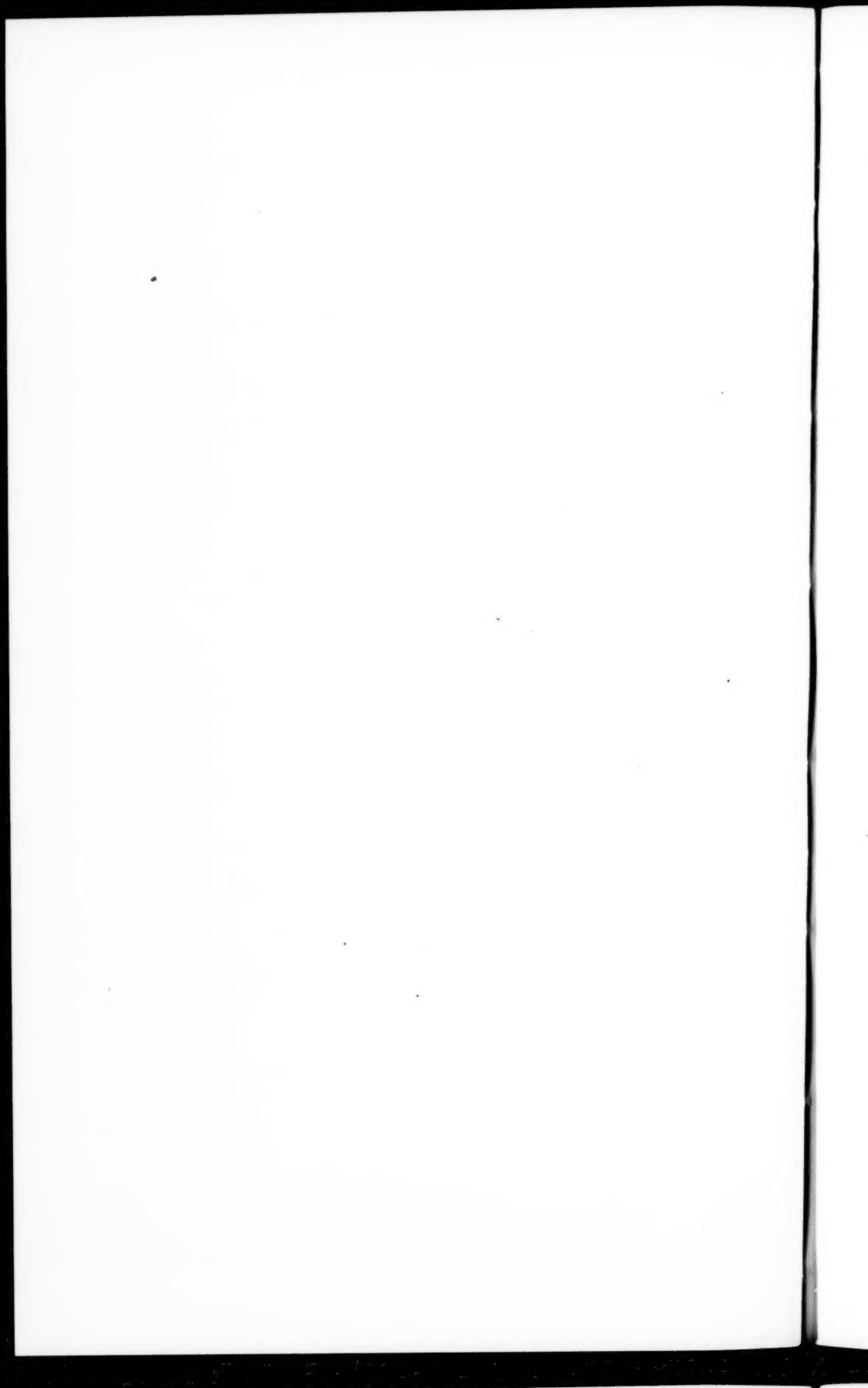
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Public Health Reports

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SUMMARY OF PHYSICAL FINDINGS ON MEN DRAFTED IN THE WORLD WAR

By ROLLO H. BRITTEN, *Senior Statistician*, and GEORGE ST. J. PERROTT, *Chief, Division of Public Health Methods, National Institute of Health, United States Public Health Service*

In connection with a suggested program of physical rehabilitation of registrants disqualified for duty with the armed forces under the Selective Training and Service Act of 1940,¹ it is desirable to summarize in available form the major findings of the World War draft examinations of 1917-18.² On the basis of estimates of the number of men to be conscripted in the draft of 1940-41,³ the World War draft findings afford some indication of the numbers of men who, because of physical and mental impairments, will be classified as not available for general military training in the various States between now and July 1, 1941, and also the impairments which will be recorded among them.

¹ See Public Health in the National Defense Program. Summary of Proceedings, Special Conference of State and Territorial Health Officers with the United States Public Health Service, Washington, D. C., September 16-17, 1940. Pub. Health Rep., 55:1760-1776 (1940).

² Love, Albert G., and Davenport, Charles B.: Defects Found in Drafted Men. Statistical information compiled from the draft records, showing the physical conditions of the men registered and examined in pursuance of the requirements of the Selective Service Act. Government Printing Office, Washington, 1920.

³ Preliminary quotas by States announced by the Selective Service headquarters (October 19, 1940) are as follows:

<i>First Corps Area</i> ...	37,961	<i>Fourth Corps Area—Con.</i>		<i>Seventh Corps Area—Con.</i>	
Connecticut.....	8,421	Louisiana.....	15,084	North Dakota..	3,401
Maine.....	3,081	Mississippi.....	12,759	South Dakota..	3,525
Massachusetts..	20,556	North Carolina..	15,613	<i>Eighth Corps Area</i> ..	52,475
New Hampshire.....	1,579	South Carolina..	5,957	Arizona.....	3,098
Rhode Island....	3,118	Tennessee.....	14,229	Colorado.....	3,837
Vermont.....	1,206	<i>Fifth Corps Area</i>	91,192	New Mexico....	2,962
<i>Second Corps Area</i> ..	148,295	Indiana.....	21,087	Oklahoma.....	9,365
Delaware.....	1,329	Kentucky.....	9,154	Texas.....	33,213
New Jersey.....	32,170	Ohio.....	52,497	<i>Ninth Corps Area</i> ...	54,985
New York.....	114,796	West Virginia..	8,454	California.....	38,017
<i>Third Corps Area</i> ...	87,815	<i>Sixth Corps Area</i>	131,137	Idaho.....	1,954
District of Columbia.....	3,982	Illinois.....	62,223	Montana.....	2,563
Maryland.....	12,564	Michigan.....	47,282	Nevada.....	624
Pennsylvania....	61,522	Wisconsin.....	21,632	Oregon.....	2,806
Virginia.....	9,747	<i>Seventh Corps Area</i> ..	84,625	Utah.....	2,153
<i>Fourth Corps Area</i> ...	100,515	Arkansas.....	8,846	Washington....	5,821
Alabama.....	13,711	Iowa.....	11,738	Wyoming*.....	1,047
Florida.....	10,370	Kansas.....	8,388	Hawaii.....	1,400
Georgia.....	12,792	Minnesota.....	18,652	Puerto Rico.....	9,600
		Missouri.....	23,619		
		Nebraska.....	6,456	Total.....	890,000

*Wyoming was subsequently changed from the Ninth to the Seventh Corps Area.

In order that the data given may be as valuable as possible from this point of view, the present summary has been confined to a group of drafted men (the so-called "second million") who were examined at camp after May 1, 1918. By this time, examination procedures had become more efficient and standardized, and, it is believed, more nearly comparable to those which will be given under the present law.⁴ It is necessary, of course, to consider the local board examinations also, since men rejected (and a large proportion of those placed in limited service groups) by local boards were not sent to camp and were therefore not included in the camp records.⁵ Local board data are, in general, limited to the reexaminations made under an order promulgated by the President on November 8, 1917.

On this basis 21.3 percent of drafted men⁶ were rejected, 9.9 percent were placed in limited service groups, and 52.1 percent were found to have defects. Thus, about one-third (31.2 percent) were classified as not available for general military service. If one felt justified in applying this latter percentage to examinations to be made under the Selective Training and Service Act of 1940, he would conclude that about 1,200,000 men would have to be examined to meet the quota of 800,000 (expected by July 1, 1941) and thus that about 400,000 would be rejected or placed in the limited service group, i. e., would be classified, on physical grounds, as not available for general military service.⁷

On the basis of World War draft data to be given later in this paper estimates may be made of the number of defects which will be noted among these 400,000 men. Such estimates are presented (to the nearest hundred) in table 1. It is to be observed that a single individual might have been recorded as having more than one impairment, which explains the fact that the number of impairments is 497,100 and not 400,000. Figures 1 and 2 present the comparison graphically, first by broad groups of defects, second by more specific defects. In the charts, rates (taken from table 4) are substituted for the actual numbers, since they are more generally applicable. It would be desirable, but is not practicable, to give the proportion of persons according to the defect which caused them to be judged unfit for general military service; however, rates are calculated per 1,000 total drafted men rather than per 1,000 men not available for general military service, in order to come as close as possible to this concept.

⁴ An additional point is that the punched cards for the so-called "first million" recorded only one defect on any one individual, whereas the cards for local board examinations and for the "second million" recorded more than one (if reported).

⁵ See appendix for method of calculation. Rates given on pp. 1763-1764 of the article cited in footnote 1 differ from those appearing in this report by reason of differences in the method of calculation. In the former article, for instance, persons placed in limited service groups by local boards (and who did not get to camp) were disregarded.

⁶ The term "drafted men," as used in this report, refers to examined persons, thus including those rejected.

⁷ Number to be examined equals quota (800,000) divided by 1 minus the proportion classified as not available for general military service (taken as one-third because of lack of precision in the estimate).

TABLE 1.—Estimated number of defects that will be found among 400,000 men not available for general military service because of physical or mental impairments (out of a total of 1,200,000 men examined)

Diseases or defects		Number		Diseases or defects		Number	
Orthopedic impairments.....		126,400		Tuberculosis (all forms) actual or suspected.....		29,100	
Crippled or paralyzed members.....			46,400	Defective and deficient teeth.....		29,000	
Lost members:				Nervous or mental diseases.....		28,600	
Upper extremities:				Mental deficiency.....			14,400
Fingers.....			6,300	Epilepsy.....			4,700
Other.....			1,800	Mental alienation.....			4,400
Lower extremities.....			4,700	Other.....			5,100
Flat feet.....			38,900	Ear defects.....		17,500	
Other specified foot defects.....			20,800	Defective hearing.....			8,200
Curvature of the spine.....			7,500	Otitis media.....			8,200
Eye defects.....		64,200		Other ear diseases.....			1,100
Defective vision.....			49,000	Venereal diseases.....		8,500	
Blindness in one or both eyes.....			8,800	Gonorrhea.....			5,000
Trachoma.....			1,300	Syphilis.....			3,300
Other eye defects.....			5,100	Chancroid.....			200
Cardiovascular-renal diseases.....		56,700		Varicose veins, varicocele.....		7,400	
Valvular diseases of the heart.....			33,400	Goiter.....		6,800	
Cardiac hypertrophy.....			4,600	Hypertrophic tonsillitis.....		6,300	
Tachycardia.....			5,800	Arthritis and allied affections.....		3,800	
Functional heart diseases.....			4,100	Asthma.....		2,700	
Other.....			8,800	Other diseases or defects.....		43,500	
Underweight.....		35,600		All diseases or defects.....		497,100	
Hernia and inguinal rings.....		31,000					
Hernia.....			25,200				
Enlarged rings.....			5,800				

It will be observed that many of the diagnosis groups represent defects of which a large proportion may be regarded as remediable. From this point of view, perhaps the most important conditions are: Defective vision (40.8 per 1,000 total drafted men), underweight

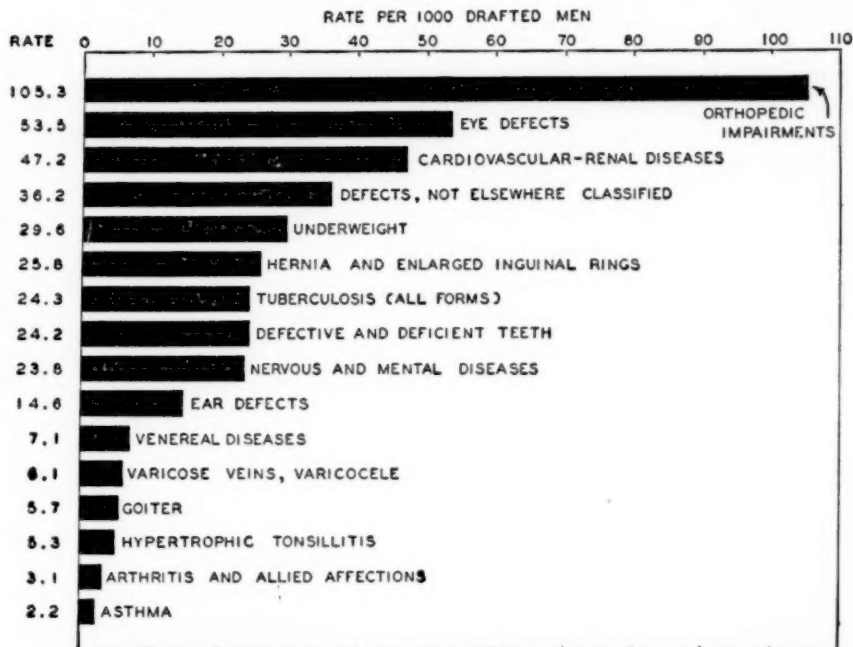


FIGURE 1.—Prevalence of defects (per 1,000 drafted men) noted in men who were rejected or accepted for limited service only (broad groups).

(29.6), tuberculosis (24.3), defective and deficient teeth (24.2), hernia (21.0), venereal diseases (7.1),⁸ defective hearing (6.8), otitis media (6.8), varicose veins and varicocele (6.1), goiter (5.7), hypertrophic tonsillitis (5.3), and trachoma (1.1). Many of the individual cases classified under various other diagnosis groups would also prove to be correctible.

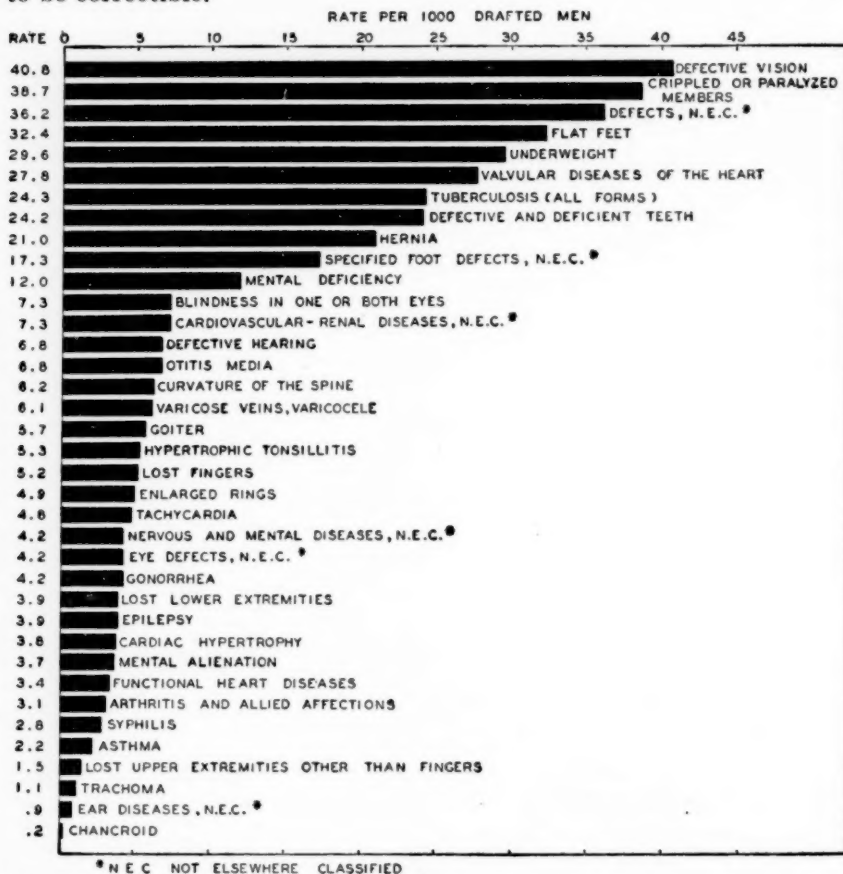


FIGURE 2.—Prevalence of defects (per 1,000 drafted men) noted in men who were rejected or accepted for limited service only (specific diagnoses).

The possible distribution, by States, of the estimated 400,000 men not available for general military training is, of course, of great interest as indicating the extent of the problem of rehabilitation in each State. Any such figures are subject to grave errors, since the number who will volunteer in each State is not known, and since it is not certain to what extent the wide State-to-State variation of the World War draft data will be repeated in the present examinations, but there seems no basis upon which any estimates can be made other

⁸ In view of modern serodiagnostic methods and the adoption of plans for Wassermann tests on all persons examined, the number of men diagnosed as having venereal disease may be expected to be increased considerably.

than the experience of the World War draft. Hence, in spite of a possible early refutation of the estimates, they are presented here as the only available estimates of the magnitude of the proposed rehabilitation project in each State. The numbers are given in table 2 and the percentages in figure 3.

TABLE 2.—*Estimated distribution by State of 400,000 persons not available for general military service*¹

State	Estimated number	State	Estimated number
Alabama.....	4,600	Nevada.....	200
Arizona.....	900	New Hampshire.....	1,000
Arkansas.....	2,600	New Jersey.....	17,200
California.....	22,100	New Mexico.....	1,100
Colorado.....	2,300	New York.....	78,500
Connecticut.....	4,800	North Carolina.....	6,900
Delaware.....	800	North Dakota.....	1,000
District of Columbia.....	1,800	Ohio.....	22,400
Florida.....	4,400	Oklahoma.....	3,100
Georgia.....	5,900	Oregon.....	1,700
Idaho.....	800	Pennsylvania.....	33,700
Illinois.....	28,100	Rhode Island.....	4,600
Indiana.....	7,800	South Carolina.....	2,600
Iowa.....	4,700	South Dakota.....	1,300
Kansas.....	2,400	Tennessee.....	7,200
Kentucky.....	3,300	Texas.....	9,900
Louisiana.....	6,900	Utah.....	1,100
Maine.....	2,900	Vermont.....	1,500
Maryland.....	6,900	Virginia.....	5,500
Massachusetts.....	17,100	Washington.....	4,200
Michigan.....	27,000	West Virginia.....	3,000
Minnesota.....	6,900	Wisconsin.....	9,700
Mississippi.....	4,700	Wyoming.....	200
Missouri.....	10,100		
Montana.....	900		
Nebraska.....	1,700	All States.....	400,000

¹ The estimate is exclusive of Alaska, Hawaii, and Puerto Rico.

It will be observed that the rates vary widely by State. For Rhode Island the rate (of persons classified as not available for general military service) was 58.5 percent; for Wyoming, at the other extreme, it was 18.4. For a discussion of the significance of the variation from State to State it will be necessary to consult the report, "Defects Found in Drafted Men." It is manifest, however, that part of the variation is to be ascribed to real differences in the physical condition of men coming from different States, part to variations in the examination technique of local boards, and part to similar variations at the camps.

It is not practicable to say to what extent the differences among States in 1917-18 will be reflected in the new draft examinations. Insofar as the variation represents real geographic differences in physical status, it is plausible to expect a recurrence of the same phenomenon. Insofar as it represents a different average level of examination technique of local boards in different States, we may perhaps expect more or less conformity to the same pattern. Much of the variation by camps, however, must be regarded as dependent on a complicated set of circumstances, involving camp management as well as the proficiency of the medical staff.

DESCRIPTION OF DATA USED

The figures used for the number of men examined by the local boards are as given in the report, "Defects Found in Drafted Men." They comprise: (a) Men examined by local boards after December 15, 1917 (3,247,888), and (b) 516,212 men who had entrained for

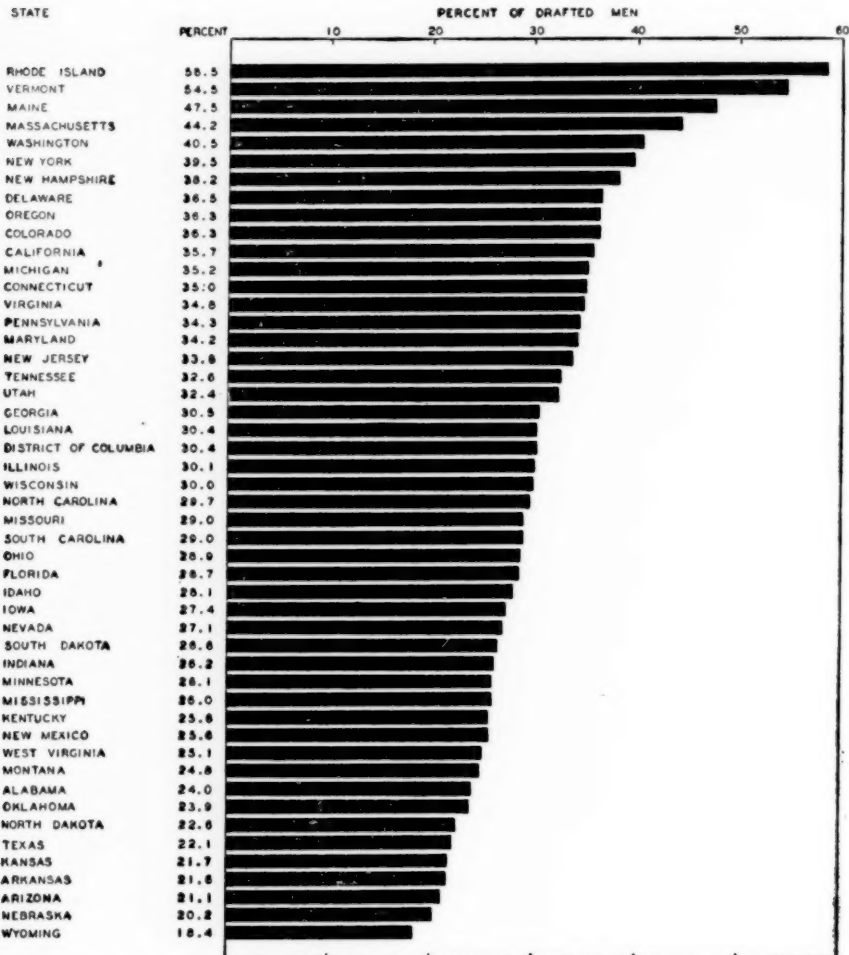


FIGURE 3.—Percentage of drafted men rejected or accepted for limited service only, by State.

camps in the first draft, prior to December 15. Most of the men were between the ages of 21 and 31. The figures on the number rejected by the local boards (549,099 for the whole country) are again those given in the report, "Defects Found in Drafted Men." Figures for the number of men placed in limited service groups by the local boards were obtained from a report of the Provost Marshal General.⁹

⁹ Second Report of the Provost Marshal General to the Secretary of War on the Operations of the Selective Service System to December 20, 1918. Government Printing Office, Washington, 1919.

There were 427,813 such men, of whom 128,355 reached camp (by September 11, 1918).

The "second million" constituted a sample of 967,486 men out of 1,672,661 sent to camp after May 1, 1918 (excluding third registration, which extended the age limits to 18 to 45, and certain special groups). The sample for which data are shown in the report, "Defects Found in Drafted Men," was obtained by taking physical examination records from an alphabetical file beginning with the letter A and continuing through the letter N. As indicated, 994,206 camp examinations made prior to May 1, 1918 ("first million") are disregarded in the present summary.

All figures relate to white and colored persons combined.

Methods of calculation are described in the appendix.

DISCUSSION OF DETAILED TABLES

Table 3 gives the number of persons, by States, (a) examined and rejected by the local boards, or (b) falling into different physical status groups on the basis of camp examinations. In the succeeding tables the results of the local board and camp examinations are combined as described in the appendix.

TABLE 3.—*Number of men examined by local boards and at camp ("second million") according to physical status groups*

State	Local boards		Camps				
	Examined	Rejected	Examined	Accepted for general service		Accepted for limited service	Rejected
				With no defects	With defects		
Alabama.....	84,985	7,776	22,604	14,314	5,506	401	2,383
Alaska.....	2,116	307	658	339	245	14	40
Arizona.....	11,527	1,432	2,137	1,330	661	85	61
Arkansas.....	70,030	6,531	20,478	13,323	5,183	354	1,618
California.....	102,246	20,823	19,184	8,755	7,514	1,679	1,236
Colorado.....	29,984	5,387	8,658	4,431	3,468	374	385
Connecticut.....	50,898	8,509	9,982	5,352	3,122	910	598
Delaware.....	7,338	886	1,852	1,096	454	109	193
District of Columbia.....	14,364	1,845	4,580	2,468	1,561	298	253
Florida.....	35,585	4,501	12,038	5,968	4,506	568	996
Georgia.....	93,530	11,810	24,897	15,016	6,329	335	3,217
Idaho.....	17,911	2,046	5,480	3,005	1,890	172	413
Illinois.....	252,001	36,095	55,969	33,363	15,366	2,426	4,814
Indiana.....	102,459	13,823	25,622	16,864	6,252	882	1,624
Iowa.....	89,292	13,839	27,319	18,706	6,121	724	1,768
Kansas.....	57,586	5,147	19,124	14,311	3,021	465	1,327
Kentucky.....	88,890	14,660	21,657	15,996	4,160	434	1,067
Louisiana.....	77,106	11,642	19,885	12,578	4,790	273	2,244
Maine.....	25,185	6,751	7,666	4,359	2,063	411	833
Maryland.....	48,775	10,705	12,692	7,799	3,753	628	512
Massachusetts.....	124,302	23,432	29,476	15,728	7,817	2,909	3,022
Michigan.....	126,743	19,916	29,300	15,538	9,036	1,905	2,821
Minnesota.....	97,681	13,274	23,963	15,427	5,992	648	1,895
Mississippi.....	63,989	6,629	17,379	10,462	4,478	483	1,956
Missouri.....	129,926	17,557	34,244	20,278	9,604	1,125	3,237
Montana.....	39,743	3,917	9,887	5,538	3,280	386	683
Nebraska.....	50,578	3,995	11,237	7,585	2,491	382	779
Nevada.....	4,832	596	971	599	269	37	66
New Hampshire.....	13,115	1,743	3,678	1,872	1,176	338	292
New Jersey.....	107,494	14,717	23,177	13,652	6,084	1,084	2,357
New Mexico.....	14,830	2,509	3,426	2,157	1,048	66	155
New York.....	356,419	59,988	83,850	48,017	20,483	6,847	8,503

TABLE 3.—*Number of men examined by local boards and at camp ("second million") according to physical status groups—Continued*

State	Local boards		Camps				
	Examined	Rejected	Examined	Accepted for general service		Accepted for limited service	Rejected
				With no defects	With defects		
North Carolina.....	82,544	10,819	23,361	15,365	4,901	841	2,254
North Dakota.....	28,493	3,099	6,170	3,601	1,995	96	478
Ohio.....	193,734	27,347	46,882	32,607	9,341	1,957	2,977
Oklahoma.....	81,418	10,947	24,673	15,617	7,035	347	1,674
Oregon.....	22,458	3,251	7,946	3,552	3,295	302	797
Pennsylvania.....	290,472	39,265	67,931	32,343	23,377	4,257	7,954
Rhode Island.....	15,254	5,633	4,535	2,446	1,282	414	393
South Carolina.....	57,952	7,049	18,002	11,847	3,736	240	2,179
South Dakota.....	30,327	4,058	9,359	6,973	1,577	161	648
Tennessee.....	85,970	14,960	22,607	14,795	4,739	770	2,303
Texas.....	166,868	22,590	45,496	31,567	11,170	408	2,351
Utah.....	16,978	2,516	3,663	2,036	1,157	206	264
Vermont.....	10,024	2,873	2,916	1,394	975	256	291
Virginia.....	77,410	11,967	22,119	9,715	8,279	978	3,147
Washington.....	44,953	9,161	10,369	5,233	3,606	613	797
West Virginia.....	58,308	6,123	17,714	9,011	6,456	469	1,778
Wisconsin.....	98,413	12,867	24,356	13,603	7,747	849	2,157
Wyoming.....	12,065	774	3,552	1,689	1,506	109	218
State not specified.....		917	12,765	7,963	2,963	409	1,430
Grand total.....	3,764,101	549,099	967,486	577,603	262,950	41,464	85,469

As stated above, it was not possible to give data with respect to the number of men rejected for, or placed in limited service groups by reason of, specific defects. No classification was made in the draft report by men according to cause. In fact, more than one cause was frequently associated with the rejection or classification into limited service groups. The rates will therefore be given per 1,000 drafted men, but the impairments will be subdivided on the basis of the physical status group into which the men themselves were placed. The rates are shown in table 4 by diagnosis.¹⁰

¹⁰ The draft diagnosis classification numbers (see table 5) of the conditions included under each of the categories listed in table 4 are as follows:

Orthopedic impairments:	Eye defects—Continued.	Nervous or mental diseases—Con.
Crippled or paralyzed members (198-204, 207-215, 219, 225-227, 229, 232, 233, 237-247).	Other eye defects (78-80, 80 (a), 82, 83, 86-92, 96-98).	Epilepsy (46, 47).
Lost members:	Cardiovascular-renal diseases:	Mental alienation (64, 65, 67-73).
Upper extremities:	Valvular diseases of the heart (119-127).	Other (36, 48-50, 52, 52 (a), 53, 55-57, 62, 63).
Fingers (228).	Cardiac hypertrophy (128).	Ear defects:
Other (205).	Tachycardia (145).	Defective hearing (58-60, 102).
Lower extremities (206, 223).	Functional heart diseases (51, 141, 142).	Otitis media (99).
Flat feet (221).	Other (37-45, 117, 118, 129-134, 140, 143, 144, 175-177).	Other ear diseases (100, 101, 103).
Other specified foot defects (216-218, 220, 222, 224, 234, 236).	Underweight (26, 250, 252).	Veneral diseases:
Curvature of the spine (13, 61).	Hernia and inguinal rings:	Gonorrhea (11).
Eye defects:	Hernia (164).	Syphilis (9).
Defective vision (74-77, 84).	Enlarged rings (165).	Chancroid (10).
Blindness in one or both eyes (85, 93-95).	Tuberculosis (all forms) actual or suspected (6-8).	Varicose veins, varicocele (136-137).
Trachoma (81).	Defective and deficient teeth (153).	Goiter (18, 24).
	Nervous or mental diseases:	Hypertrophic tonsillitis (115).
	Mental deficiency (69).	Arthritis and allied affections (16, 80, 54, 235).
		Asthma (149).

TABLE 4.—Prevalence of defects among drafted men, according to physical status classification

Diseases or defects	Defects among rejected men per 1,000 drafted men		Defects among rejected or limited service men per 1,000 drafted men		Defects among rejected, limited service, or general service men per 1,000 drafted men	
Orthopedic impairments.....	56.64		105.28		213.16	
Crippled or paralyzed members.....		25.25		38.69		48.70
Lost members:						
Upper extremities:						
Fingers.....		2.46		5.24		7.57
Other.....		1.42		1.53		1.56
Lower extremities.....		3.19		3.88		4.56
Flat feet.....		11.83		32.41		104.37
Other specified foot defects.....		7.78		17.31		38.74
Curvature of the spine.....		4.71		6.22		7.66
Eye defects.....	32.05		53.48		61.01	
Defective vision.....		21.99		40.82		46.28
Blindness in one or both eyes.....		5.69		7.32		7.48
Trachoma.....		1.06		1.10		1.24
Other eye defects.....		3.31		4.24		6.01
Cardiovascular-renal diseases.....	38.90		47.20		50.20	
Valvular diseases of the heart.....		23.59		27.81		29.63
Cardiac hypertrophy.....		3.44		3.84		4.15
Tachycardia.....		3.70		4.82		5.04
Functional heart diseases.....		1.54		3.41		3.69
Other.....		6.63		7.32		7.69
Underweight.....	20.37		29.63		31.14	
Hernia and inguinal rings.....	15.64		25.81		55.36	
Hernia.....		14.38		20.96		27.56
Enlarged rings.....		1.26		4.85		27.80
Tuberculosis (all forms) actual or suspected.....	23.23		24.29		24.74	
Defective and deficient teeth.....	9.50		24.18		26.27	
Nervous or mental diseases.....	22.06		23.83		24.53	
Mental deficiency.....		11.37		12.00		12.23
Epilepsy.....		3.82		3.88		3.92
Mental alienation.....		3.39		3.70		3.79
Other.....		3.48		4.25		4.59
Ear defects.....	12.59		14.55		15.45	
Defective hearing.....		5.50		6.82		7.11
Otitis media.....		6.36		6.81		7.30
Other ear diseases.....		.73		.92		1.04
Veneral diseases.....	4.73		7.12		46.77	
Gonorrhea.....		2.20		4.15		36.03
Syphilis.....		2.41		2.78		9.51
Chancroid.....		.12		.19		1.23
Varicose veins, varicocele.....	3.99		6.15		8.75	
Goiter.....	4.01		5.66		11.38	
Hypertrophic tonsillitis.....	1.57		5.25		33.77	
Arthritis and allied affections.....	2.37		3.14		3.48	
Asthma.....	2.06		2.23		2.33	
Other diseases or defects.....	27.12		36.24		53.56	
All diseases or defects.....	276.83		414.05		661.94	

The three physical status groups employed are: (a) Rejected men; (b) men not accepted for general military service (i. e., rejected men plus those placed in limited service groups); and (c) total with some recorded defect (i. e., rejected men, plus those accepted for limited service, or accepted for general military service with recorded defect).¹¹ The second of these groups, (b), was utilized as a basis for the estimated numbers in table 1.

The three groups are presented separately to give as adequate a statement as possible of the rate of defects of varying degrees of severity likely to be encountered in the present conscription examina-

¹¹ The rates in table 4 are additive, those for the limited service groups being obtainable by subtraction of the first two columns from the third and fourth, respectively; those for the group accepted for general military service are obtainable by subtracting the third and fourth columns from the fifth and sixth, respectively.

tions; but, as indicated previously, the second concept is perhaps of chief interest—the rate of defects (per 1,000 total drafted men) noted among persons who were not qualified for general military service.

As a basis for more intensive study, in table 5 the rates are given according to the detailed diagnosis list of the draft report. To save space the table is limited to men who were not available for general military service.

TABLE 5.—Prevalence of defects noted in men who were rejected or accepted for limited service only. Detailed diagnosis list

Diseases or defects	Draft classification No.	Defects among rejected or limited service men per 1,000 drafted men	Diseases or defects	Draft classification No.	Defects among rejected or limited service men per 1,000 drafted men
I. Infectious diseases (excluding tuberculosis and venereal):			V. Nervous system, diseases of (all)—Continued.		
Dysentery.....	1	0.030	Muscle, paralysis of.....	44	0.09
Mycosis.....	2	.014	Paralysis (location and cause not given).....	45	.38
Pellagra.....	3	.08	Epilepsy.....	46	3.87
Infectious diseases, carriers of.....	4	.020	Jacksonian epilepsy.....	47	.008
Infectious diseases, other.....	5	.47	Neurasthenia.....	48	.72
II. Tuberculosis:			Enuresis.....	49	.07
Tuberculosis, pulmonary.....	6	17.02	Neurosis.....	50	.11
Suspected tuberculosis or weak lungs.....	7	4.70	Neuro-circulatory asthenia (disordered action of the heart).....	51	.51
Tuberculosis of other organs.....	8	2.58	Chorea.....	52	.17
III. Venereal diseases (all):			Huntington's chorea.....	52a	.001
Syphilis.....	9	2.78	Hysteria.....	53	.28
Chancre.....	10	.19	Neuritis.....	54	.14
Gonococcus infection.....	11	4.15	Speech, defective.....	55	1.21
IV. General diseases (other):			Migraine.....	56	.012
Rickets.....	12	.039	Tic.....	57	.037
Curvature of spine.....	13	5.11	Deaf and dumb.....	58	.64
Cancer and other tumors, malignant.....	14	.14	Mute.....	59	.09
Tumors, benign.....	15	.42	Deaf.....	60	.93
Arthritis.....	16	2.63	Spine, deformity or disease of (details not given).....	61	1.10
Diabetes mellitus.....	17	.20	Spinal cord, other diseases of.....	62	.38
Goiter, exophthalmic.....	18	3.59	Nervous system, other diseases of.....	63	1.10
Cretinism and myxedema.....	19	.018	VI. Mental alienation:		
Addison's disease.....	20	.004	General paralysis of the insane.....	64	.09
Gigantism.....	21	.001	Constitutional psychopathic states.....	65	.75
Acromegaly.....	21a	.012	Mental deficiency.....	66	12.00
Leukemia.....	22	.004	Malingerer.....	67	.001
Hodgkin's disease.....	23	.015	Dementia praecox.....	68	.65
Goiter, simple.....	24	2.07	Psychasthenia.....	69	.13
Ductless glands, other diseases of.....	25	.23	Psychoneurosis.....	70	.84
Anemia.....	26	.15	Psychosis, alcoholic.....	71	.019
Hemophilia.....	27	.024	Psychosis, manic depressive.....	72	.17
Obesity.....	28	2.05	Psychosis, other.....	73	1.04
Purpura.....	29	.005	VII. Eyes and their annexa, diseases of:		
Muscular rheumatism.....	30	.35	Astigmatism.....	74	1.24
General diseases, other.....	31	.10	Hyperopia.....	75	.92
Alcoholism.....	32	.31	Myopia.....	76	2.82
Drug addiction.....	33	.61	Defective vision (cause not stated).....	77	34.19
Poisoning, chronic.....	34	.036	Strabismus.....	78	1.00
Miner's consumption (anthracosis).....	35	.011	Leucoma.....	79	.15
V. Nervous system, diseases of (all):			Cataract.....	80	.81
Tabes dorsalis.....	36	.16	Aphakia.....	80a	-----
Multiple sclerosis.....	37	.11	Trachoma (conjunctivitis, granular).....	81	1.10
Hemiplegia and apoplexy.....	38	.55	Conjunctivitis, other.....	82	.17
Facial paralysis.....	39	.09	Pterygium.....	83	.05
Paraplegia.....	40	.32			
Monoplegia.....	41	1.15			
Ocular muscle, paralysis of.....	42	.004			
Nerve, paralysis of.....	43	.043			

TABLE 5.—Prevalence of defects noted in men who were rejected or accepted for limited service only. Detailed diagnosis list—Continued

Diseases or defects	Draft classification No.	Defects among rejected or limited service men per 1,000 drafted men	Diseases or defects	Draft classification No.	Defects among rejected or limited service men per 1,000 drafted men
VII. Eyes and their annexa, diseases of—Continued.			XI. Circulatory system, diseases of—Continued.		
Amblyopia.....	84	1.65	Cardiac arrhythmias.....	140	0.66
Amaurosis.....	85	.031	Cardiac murmurs, not organic.....	141	.55
Choroiditis.....	86	.43	Cardiac disorders, functional.....	142	2.36
Keratitis.....	87	.11	Bradycardia.....	143	.018
Retinitis.....	88	.14	Heart block.....	144	.007
Nystagmus.....	89	.29	Tachycardia.....	145	4.82
Glaucoma.....	90	.048	Circulatory system, other diseases of.....	146	.33
Eyelid, disease of.....	91	.14	XII. Respiratory system, diseases of:		
Color blindness.....	92	.016	Bronchitis.....	147	.72
Eye, enucleation of.....	93	1.51	Pleurisy.....	148	.48
Blindness in one eye.....	94	5.30	Asthma.....	149	2.23
Blindness in both eyes.....	95	.49	Hay fever.....	150	.010
Ocular hemorrhage.....	96	.006	Emphysema.....	151	.46
Opacity of the cornea (cause not stated).....	97	.09	Respiratory system, other diseases of (except pulmonary tuberculosis).....	152	.36
Eye, other diseases of.....	98	.80	XIII. Digestive system, diseases of:		
VIII. Ear, diseases of:			Defective and deficient teeth.....	153	24.18
Otitis media.....	99	6.81	Dental caries.....	154	.07
Perforated eardrum.....	100	.68	Pyorrhea alveolaris.....	155	.23
Otitis, external.....	101	.007	Mouth and annexa, other diseases of.....	156	.07
Defective hearing.....	102	5.17	Esophagus, diseases of.....	157	.023
Ear, other diseases of.....	103	.23	Ulcer of the stomach.....	158	.23
IX. Nasal fossae, diseases of:			Stomach, other diseases of.....	159	.11
Adenoids.....	104	.006	Diarrhea and enteritis.....	160	.08
Deviation of the nasal septum.....	105	.22	Ankylostomiasis (uncinariasis, hookworm).....	161	.012
Nose, external deformity of.....	106	.005	Intestinal parasites.....	162	.045
Turbinate, hypertrophy of.....	107	.017	Appendicitis.....	163	.11
Sinusitis.....	108	.63	Hernia.....	164	20.96
Polypus, nasal.....	109	.028	Inguinal rings, enlargement of.....	165	4.85
Perforated nasal septum.....	110	.006	Intestinal obstruction.....	166	.033
Ozena.....	111	.08	Fistula in ano.....	167	.39
Rhinitis.....	112	.26	Fistula, fecal.....	168	.016
Nasal fossae, other diseases of.....	113	.29	Intestines, other diseases of.....	169	.15
X. Throat, diseases of:			Cirrhosis of the liver.....	170	.026
Larynx, diseases of.....	114	.049	Liver, gall bladder, and gall ducts, other diseases of.....	171	.13
Tonsillitis, hypertrophic.....	115	5.25	Peritoneal adhesions.....	172	.07
Tonsils, focal infection from.....	115a	.021	Visceroptosis.....	173	.009
Tonsils, other diseases of.....	115b	.28	Digestive system, other diseases of.....	174	.17
Pharynx, diseases of.....	116	.11	XIV. Genitourinary system, diseases of (nonvenereal):		
XI. Circulatory system, diseases of:			Nephritis.....	175	.60
Pericarditis.....	117	.043	Nephroptosis.....	176	.015
Endocarditis.....	118	.77	Kidney and annexa, other diseases of.....	177	.58
Valvular diseases of the heart.....	119	-----	Nephrolithiasis.....	178	.05
Aortic insufficiency.....	120	1.22	Bladder, diseases of.....	179	.29
Aortic stenosis.....	121	.39	Urinary fistula.....	180	.06
Mitral insufficiency.....	122	9.78	Urethra, diseases of.....	181	.11
Mitral stenosis.....	123	2.39	Prostate, diseases of.....	182	.036
Combined lesions, aortic and mitral.....	124	.41	Hydrocele.....	183	.70
Pulmonic lesions.....	125	.10	Genitourinary system, other diseases of (nonvenereal).....	184	.67
Triuspid lesions.....	126	.032	XV. Skin and cellular tissue, diseases of:		
Valvular lesions, unclassified.....	127	13.49	Cellulitis.....	185	.006
Cardiac hypertrophy.....	128	3.84	Trichophytosis.....	186	.007
Cardiac dilatation.....	129	.39	Nails, defect and disease of.....	187	.027
Myocarditis.....	130	.56	Ectoparasites.....	188	.028
Myocardial insufficiency.....	131	.35			
Aneurisms.....	132	.049			
Arteriosclerosis and hypertension.....	133	.53			
Aortitis.....	134	.002			
Hemorrhoids.....	135	1.07			
Varicocele.....	136	1.78			
Varicose veins.....	137	4.36			
Phlebitis.....	138	.24			
Lymphatic system, diseases of.....	139	.22			

TABLE 5.—Prevalence of defects noted in men who were rejected or accepted for limited service only. Detailed diagnosis list—Continued

Diseases or defects	Draft classification No.	Defects among rejected or limited service men per 1,000 drafted men	Diseases or defects	Draft classification No.	Defects among rejected or limited service men per 1,000 drafted men
XV. Skin and cellular tissue, diseases of—Continued.			XVI. Bones and organs of locomotion, diseases of—Con.		
Bromidrosis.....	189	0.026	Fingers, loss of one or more.....	228	5.24
Raynaud's disease.....	190	.004	Osteitis deformans.....	229	.049
Keloid.....	191	.024	Recent operation wound.....	230	.24
Large scar of face.....	192	.018	Scar on head.....	231	.011
Abdominal scar.....	193	.32	Hernia of muscle.....	232	.012
Painful cicatrices.....	194	.30	Exostoses.....	233	.27
Cicatricial contracture.....	195	.50	Metatarsalgia.....	234	1.64
Cicatricial deformities.....	196	.41	Myositis.....	235	.022
Skin and cellular tissue, other diseases of.....	197	2.01	Talipes.....	236	.74
XVI. Bones and organs of locomotion, diseases of:			Deformity of (location not given).....	237	.65
Fracture, malunion of, upper extremity.....	198	2.26	Upper extremity, deformity of.....	238	2.08
Fracture, malunion of, lower extremity.....	199	3.35	Lower extremity, deformity of.....	239	4.19
Fracture, malunion of, other than of extremities.....	200	.29	Trunk, deformity of.....	240	.20
Fracture, faulty union of, location not given.....	201	-----	Head, deformity of.....	241	.23
Fracture, nonunion of, upper extremity.....	202	.08	Chest, deformity of.....	242	1.32
Fracture, nonunion of, lower extremity.....	203	.10	Upper extremity, atrophy of muscle of.....	243	.72
Lower extremity, shortening of.....	204	3.30	Lower extremity, atrophy of muscle of.....	244	1.89
Upper extremity, loss of whole or part of.....	205	1.53	Osteitis.....	245	.038
Lower extremity, loss of whole or part of.....	206	2.41	Divided ligament, muscle or tendon.....	246	.14
Ankylosis, bony, of joint.....	207	4.56	Bones and organs of locomotion, other diseases of.....	247	4.38
Ankylosis, fibrous, of joint.....	208	3.18	XVII. Congenital malformations and ill-defined diseases:		
Joint, contracture of.....	209	.05	Defective physical development.....	248	2.34
Bursitis.....	210	.07	Deficient chest measurement.....	249	.72
Tenosynovitis.....	211	.024	Underweight.....	250	29.24
Joint, relaxed ligaments of.....	212	.24	Under height.....	251	3.02
Joint, resection of.....	213	.002	Malnutrition.....	252	.24
Chronic dislocation (other than hand).....	214	1.04	Anorchism.....	253	.021
Muscle, fascia, tendon, sheath, contracture of.....	215	1.22	Monorchism.....	254	.09
Hammertoe.....	216	1.13	Cryptorchidism.....	255	1.71
Hallux valgus.....	217	2.75	Hypospadia.....	256	.13
Plantar fascia, contracture of.....	218	.08	Gynandrisms.....	257	.034
Palmar fascia, contracture of.....	219	.004	Masochism.....	258	.001
Pes cavus.....	220	1.20	Impacted molar.....	259	.002
Pes planus.....	221	32.41	Cleft palate.....	260	.40
Pronated foot.....	222	7.08	Harelip.....	261	.09
Foot, loss of part of.....	223	1.47	Spina bifida.....	262	.018
Foot, deformity of (cause or type not specified).....	224	2.68	Albinism.....	263	.019
Ganglion.....	225	.024	Fistula, other.....	264	.19
Skull, depressed fracture of.....	226	.65	Bullet or other recent wounds.....	265	.40
Hand, deformities of (result of old injury or infection).....	227	2.09	General unfitness for military service.....	266	4.29
			Ill-defined diseases.....	267	1.20
			Diseases not specified.....	268	2.79
			Other malformations or ill-defined diseases.....	269	.11

In table 6 the percentage of men falling into the three specified cumulative physical status groups is presented by States, the States being arrayed in the table in accordance with the rates for the second of the three groups.

TABLE 6.—Percentage of drafted men in specified physical status groups

State	Percent- age re- jected	Percent- age re- jected or ac- cepted for limited service only	Percent- age with one or more recorded defects	State	Percent- age re- jected	Percent- age re- jected or ac- cepted for limited service only	Percent- age with one or more recorded defects
Rhode Island.....	41.3	58.5	72.7	North Carolina.....	20.7	29.7	46.2
Vermont.....	34.2	54.5	73.1	Missouri.....	21.0	29.0	51.3
Maine.....	33.5	47.5	64.2	South Carolina.....	22.0	29.0	45.4
Massachusetts.....	25.6	44.2	62.0	Ohio.....	18.8	28.9	43.7
Washington.....	25.3	40.5	64.1	Florida.....	19.3	23.7	59.4
New York.....	23.9	39.5	56.8	Idaho.....	17.3	28.1	55.3
New Hampshire.....	18.8	38.2	61.7	Iowa.....	20.5	27.4	45.1
Delaware.....	19.7	36.5	53.5	Nevada.....	17.4	27.1	48.0
Oregon.....	21.8	36.3	66.7	South Dakota.....	18.8	26.6	39.4
Colorado.....	20.8	36.3	63.6	Indiana.....	18.4	26.2	45.6
California.....	24.7	35.7	65.2	Minnesota.....	19.9	26.1	46.3
Michigan.....	22.7	35.2	58.4	Mississippi.....	19.9	26.0	47.9
Connecticut.....	20.8	35.0	58.1	Kentucky.....	20.3	25.6	40.3
Virginia.....	26.7	34.8	64.8	New Mexico.....	20.3	25.6	49.3
Pennsylvania.....	22.5	34.3	61.3	West Virginia.....	19.0	25.1	56.2
Maryland.....	24.6	34.2	55.4	Montana.....	15.4	24.8	52.0
New Jersey.....	21.2	33.8	52.3	Alabama.....	18.1	24.0	44.4
Tennessee.....	25.2	32.6	48.6	Oklahoma.....	19.0	23.9	47.2
Utah.....	20.9	32.4	50.1	North Dakota.....	17.3	22.6	49.2
Georgia.....	23.0	30.5	50.0	Texas.....	17.7	22.1	41.9
Louisiana.....	24.0	30.4	48.7	Kansas.....	14.8	21.7	35.1
District of Co- lumbia.....	17.0	30.4	57.3	Arkansas.....	16.0	21.6	43.1
Illinois.....	20.9	30.1	51.2	Arizona.....	14.4	21.1	46.5
Wisconsin.....	19.9	30.0	54.4	Nebraska.....	13.8	20.2	39.3
				Wyoming.....	12.6	18.4	56.8

Causes of the wide variation in the rates from State to State have already been discussed. It will be noted that this tendency is present in each of the three groups of defects.

In table 7 the data by diagnosis are presented for each State, again employing, for brevity, the rate (per 1,000 total drafted men) of defects noted in men who were not available for general military service.

TABLE 7.—Prevalence of defects (per 1,000 total drafted men) noted in men who were rejected or accepted for limited service, by State

Diseases or defects	Ala- bama	Ari- zona	Arkan- sas	Cali- fornia	Colo- rado	Connec- ticut	Delaware	Dis- trict of Columbia	Flori- da	Geor- gia
Orthopedic impairments.....	70.45	84.23	72.56	136.98	162.76	110.13	151.81	101.85	109.52	84.94
Crippled or paralyzed members.....	30.24	26.11	26.03	39.06	44.76	37.31	60.09	46.78	43.35	39.75
Lost members:										
Upper extremities:										
Fingers.....	4.19	4.77	3.34	3.89	8.97	6.23	4.50	3.69	4.48	4.43
Other.....	1.01	.52	1.13	1.52	1.70	1.43	.41	.70	1.46	1.70
Lower extremities.....	3.57	2.60	3.14	4.34	4.50	4.01	2.73	2.85	3.97	3.69
Flat feet.....	16.99	45.72	27.27	69.51	87.75	36.70	29.84	23.60	31.09	15.52
Other specified foot de- fects.....	10.48	3.21	9.22	11.47	8.14	17.53	32.98	17.06	19.45	14.23
Curvature of the spine.....	3.97	1.30	2.43	7.18	6.94	6.92	12.26	7.17	5.72	5.62
Eye defects.....	26.51	26.47	32.57	41.75	60.93	70.04	64.06	61.89	41.99	41.26
Defective vision.....	17.01	17.87	20.52	31.69	44.19	61.52	51.38	48.38	29.44	27.39
Blindness in one or both eyes.....	6.06	5.73	6.07	7.03	11.07	5.58	3.82	7.59	7.52	10.53
Trachoma.....	.80	1.13	2.30	.46	.57	.35	.41	.84	.56	.13
Other eye defects.....	2.64	1.74	3.68	2.57	5.10	2.59	8.45	5.08	4.47	3.21

TABLE 7.—Prevalence of defects (per 1,000 total drafted men) noted in men who were rejected or accepted for limited service, by State—Continued

Diseases or defects	Ala- bama	Ari- zona	Arkan- sas	Cali- fornia	Colo- rado	Conn- ect- icut	Delaw- are	District of Colum- bia	Flor- ida	Geor- gia
Cardiovascular-renal diseases	40.57	34.35	38.57	70.83	52.39	46.43	37.89	56.25	39.75	42.63
Valvular diseases of the heart	20.50	26.29	19.21	51.30	35.19	25.86	20.71	30.21	21.23	24.91
Cardiac hypertrophy	2.85	1.04	1.56	4.49	2.90	3.52	1.64	4.39	3.83	3.16
Tachycardia	5.95	1.47	2.03	5.49	5.37	3.56	5.86	10.65	5.47	5.59
Functional heart diseases	5.57	.95	11.17	.47	1.13	1.96	6.95	4.18	1.14	2.13
Other	5.70	4.60	4.60	9.08	7.80	11.53	2.73	6.82	8.08	6.84
Underweight	20.70	8.85	14.38	31.92	28.85	35.29	56.69	37.66	32.93	49.68
Hernia and inguinal rings	25.91	9.72	25.68	24.15	27.91	22.95	31.21	20.95	32.64	24.27
Hernia	23.71	7.29	23.72	19.54	20.01	12.73	26.44	15.94	29.06	21.02
Enlarged rings	2.20	2.43	1.96	4.61	7.90	10.22	4.77	5.01	3.58	3.25
Tuberculosis (all forms), actual or suspected	20.33	61.25	17.09	54.86	52.46	25.48	15.40	21.09	18.93	20.58
Defective and deficient teeth	9.30	7.29	2.90	14.02	10.24	36.52	35.02	16.15	23.03	21.19
Nervous or mental diseases	24.54	5.99	21.52	19.04	20.01	20.67	15.95	21.52	21.18	23.99
Mental deficiency	13.39	2.00	15.09	7.61	9.27	9.43	8.18	8.98	10.69	12.59
Epilepsy	2.72	.95	2.90	3.84	4.37	4.46	3.27	4.25	4.61	2.99
Mental alienation	4.51	1.74	1.53	3.96	3.27	3.36	1.09	3.90	2.79	4.60
Other	3.92	1.30	2.00	3.63	3.10	3.42	3.41	4.39	3.09	3.81
Ear defects	7.06	6.16	6.65	16.92	15.07	19.76	9.27	14.83	6.77	6.97
Defective hearing	4.14	2.52	3.87	7.55	8.27	9.88	4.63	8.91	4.95	4.50
Otitis media	2.61	3.38	2.27	8.05	5.30	8.49	4.50	5.08	1.29	1.95
Other ear diseases	.31	.26	.51	1.32	1.50	1.39	.14	.84	.53	.52
Veneral diseases	11.16	6.07	8.88	7.10	5.44	3.23	11.18	11.83	28.63	15.11
Gonorrhea	5.57	1.56	5.35	3.67	3.74	2.22	5.45	6.75	13.70	8.14
Syphilis	5.33	4.51	3.34	3.34	1.57	.83	5.59	4.80	8.29	6.76
Chancroid	.26		.19	.09	.13	.18	.14	.28	.64	.21
Varicose veins, varicocele	4.60	2.34	4.77	5.52	7.37	7.35	6.13	6.27	4.58	5.40
Goiter	1.09	.43	.97	3.37	5.64	2.42	1.09	5.36	1.14	2.26
Hypertrophic tonsillitis	3.32	1.56	5.23	3.76	2.57	8.51	2.73	5.71	1.58	2.08
Arthritis and allied affections	4.34	1.21	2.46	3.05	1.77	1.95	1.50	2.30	6.57	5.86
Asthma	2.09	2.26	2.41	3.16	5.00	3.40	1.91	.28	3.04	1.80
Other diseases or defects	28.70	16.14	24.79	38.95	35.42	37.09	54.51	39.89	38.83	49.78
All diseases or defects	300.67	274.32	281.43	475.37	493.83	451.22	496.35	423.83	411.11	397.80

Diseases or defects	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts
Orthopedic impairments	148.14	108.10	93.00	90.89	98.96	65.31	85.95	154.93	93.73	121.26
Crippled or paralyzed members	33.39	36.40	30.90	37.30	35.91	30.51	35.09	57.61	43.08	41.91
Lost members:										
Upper extremities:										
Fingers	6.31	5.27	5.39	6.23	6.10	3.66	5.63	8.81	4.33	7.09
Other	.73	1.47	1.55	1.23	1.04	1.63	2.13	1.59	1.68	1.49
Lower extremities	3.91	4.19	3.65	3.62	3.28	3.97	3.89	3.97	3.71	2.90
Flat feet	76.77	40.37	34.17	23.28	40.18	11.13	27.29	36.33	21.86	31.96
Other specified foot defects	18.54	13.84	10.83	12.44	7.59	8.55	8.90	35.38	11.52	27.75
Curvature of the spine	8.49	6.56	6.51	6.79	4.86	5.86	3.02	11.24	7.65	8.16
Eye defects	39.85	55.57	39.66	42.79	35.90	43.50	41.08	74.02	64.55	87.79
Defective vision	29.31	42.35	28.24	31.08	24.12	23.86	26.13	65.08	51.95	76.72
Blindness in one or both eyes	6.92	7.76	7.30	6.92	7.19	9.94	10.05	5.64	7.48	7.02
Trachoma	.61	1.10	1.08	.56	.75	5.80	.84	.16	.12	.22
Other eye defects	3.01	4.36	3.04	4.23	3.84	3.90	4.06	3.14	5.00	3.83
Cardiovascular-renal diseases	54.61	40.43	35.92	53.29	31.73	26.64	43.26	76.40	58.44	58.18
Valvular diseases of the heart	44.39	25.60	20.67	28.02	19.92	16.01	26.00	32.72	39.28	32.97
Cardiac hypertrophy	2.85	2.87	2.92	4.71	1.98	1.24	2.44	6.43	5.88	4.80
Tachycardia	2.96	3.65	3.71	4.95	5.52	2.96	5.10	6.91	4.28	3.72
Functional heart diseases	.33	1.65	1.46	7.30	.56	1.18	4.27	1.99	1.46	5.99
Other	4.08	6.66	7.16	8.31	3.75	5.25	5.45	28.35	7.54	10.70
Underweight	15.69	26.94	24.88	24.53	10.91	30.82	26.38	59.56	32.82	63.98
Hernia and inguinal rings	29.87	23.91	21.66	24.09	23.32	16.54	28.64	34.98	17.81	25.76
Hernia	22.17	18.60	19.26	22.29	21.05	15.46	25.96	24.50	12.03	18.62
Enlarged rings	7.70	5.31	2.40	1.80	2.27	1.08	2.68	10.48	5.78	7.14
Tuberculosis (all forms) actual or suspected	14.91	21.99	24.53	18.09	22.04	33.96	27.56	31.17	37.93	23.51
Defective and deficient teeth	16.58	17.48	9.47	12.76	3.89	8.75	23.71	79.45	21.28	78.82
Nervous or mental diseases	13.57	20.43	24.18	27.19	20.60	30.59	28.67	39.98	41.18	23.28
Mental deficiency	7.82	8.53	12.00	13.95	9.00	17.52	18.48	25.25	25.60	9.71
Epilepsy	2.29	3.55	4.40	3.89	2.71	4.12	4.18	5.40	6.15	4.33
Mental alienation	1.62	4.21	3.42	4.77	4.55	3.90	2.57	3.06	4.90	4.51
Other	1.84	4.14	4.36	4.38	4.34	5.05	3.44	6.27	4.63	4.68

TABLE 7.—Prevalence of defects (per 1,000 total drafted men) noted in men who were rejected or accepted for limited service, by State—Continued

Diseases or defects	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts
Ear defects.....	13.56	14.39	11.95	14.00	7.55	12.08	10.35	23.82	18.25	19.69
Defective hearing.....	5.19	6.89	6.76	7.94	4.29	7.01	7.02	13.02	9.78	8.37
Otitis media.....	5.30	6.52	4.68	5.30	2.74	4.63	2.72	10.20	7.38	9.94
Other ear diseases.....	3.07	.98	.51	.76	.52	.44	.61	.60	1.03	1.38
Veneral diseases.....	6.15	6.54	6.41	3.21	5.59	5.00	21.01	5.76	7.41	4.46
Gonorrhea.....	5.14	3.51	2.87	1.86	3.49	1.99	9.79	4.05	4.05	2.97
Syphilis.....	.95	2.87	3.52	1.32	1.98	2.83	10.45	1.63	3.10	1.42
Chancroid.....	.06	.16	.02	.03	.12	.18	.77	.08	.23	.07
Varicose veins, varicocele.....	4.75	5.51	5.50	5.05	3.47	4.79	5.58	12.51	4.07	10.64
Goiter.....	12.62	10.65	6.42	5.16	4.12	2.43	1.13	2.46	3.55	.97
Hypertrophic tonsillitis.....	2.07	3.17	3.33	3.85	1.13	2.08	4.32	8.30	3.53	7.55
Arthritis and allied affections.....	4.91	2.56	2.92	2.62	3.14	1.97	4.82	4.41	3.57	2.88
Asthma.....	1.28	1.73	2.47	2.83	1.22	1.78	3.19	5.80	1.46	2.94
Other diseases or defects.....	26.63	30.13	29.71	32.66	23.88	35.12	32.54	46.77	33.69	54.61
All diseases or defects.....	405.19	389.53	342.01	363.01	297.45	321.36	338.19	660.32	443.26	586.32

Diseases or defects	Michigan	Minnesota	Mississippi	Missouri	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico
Orthopedic impairments.....	132.45	92.78	89.03	102.81	127.87	68.40	118.17	125.74	96.57	74.18
Crippled or paralyzed members.....	42.91	34.54	41.30	35.75	31.23	27.64	38.49	37.97	35.31	28.12
Lost members:										
Upper extremities:										
Fingers.....	9.70	4.49	4.53	3.97	4.91	3.89	6.42	8.92	3.79	2.63
Other.....	1.55	1.67	1.63	1.19	1.01	.83	1.24	1.07	1.38	1.62
Lower extremities.....	3.61	3.76	3.52	3.12	2.06	3.01	4.97	2.21	2.85	3.30
Flat feet.....	44.19	31.43	23.00	39.75	72.31	21.27	38.49	40.34	26.42	26.37
Other specified foot defects.....	24.96	10.67	10.72	12.78	11.47	7.63	19.25	28.67	20.18	9.51
Curvature of the spine.....	5.53	6.22	4.33	6.25	4.88	4.13	9.31	6.56	6.64	2.63
Eye defects.....	58.58	39.04	30.53	48.39	33.32	36.35	43.26	55.44	60.09	45.79
Defective vision.....	45.86	28.94	17.99	35.80	24.94	27.48	30.22	47.66	50.23	29.13
Blindness in one or both eyes.....	7.74	7.31	7.58	5.63	6.06	5.67	5.59	5.41	5.69	10.52
Trachoma.....	.47	.44	.47	2.22	.53	.95	1.45	.08	.44	1.35
Other eye defects.....	4.51	2.35	4.49	4.74	1.79	2.25	6.00	2.99	3.73	4.79
Cardiovascular-renal diseases.....	73.50	37.80	28.31	44.38	40.60	31.53	39.73	44.37	43.35	29.88
Valvular diseases of the heart.....	43.64	22.34	15.16	26.21	34.32	18.80	25.66	22.19	26.58	17.13
Cardiac hypertrophy.....	6.42	3.33	1.72	3.34	4.55	2.04	7.04	2.97	2.93	2.02
Tachycardia.....	8.49	3.07	4.49	5.19	1.66	3.22	2.48	4.50	3.57	2.43
Functional heart diseases.....	7.12	2.06	2.19	3.54	1.21	1.84	.62	4.19	4.11	3.98
Other.....	7.83	7.00	4.75	6.10	4.86	5.63	3.93	10.52	6.16	4.32
Underweight.....	24.62	23.26	15.46	25.22	8.83	9.57	26.90	45.37	34.54	23.13
Hernia and inguinal rings.....	28.02	24.42	26.68	25.02	23.80	17.46	25.66	25.47	27.93	15.23
Hernia.....	23.26	20.60	23.71	21.40	20.96	17.16	19.66	22.19	21.85	14.83
Enlarged rings.....	4.76	3.82	2.97	3.62	2.84	.30	6.00	3.28	6.08	.40
Tuberculosis (all forms) actual or suspected.....	20.26	17.68	21.18	26.34	11.93	12.50	20.07	15.78	20.62	58.60
Defective and deficient teeth.....	34.50	20.06	13.31	6.52	23.17	6.13	13.45	92.03	52.38	5.93
Nervous or mental diseases.....	19.96	20.31	30.55	27.27	8.93	14.09	9.11	19.52	15.31	20.15
Mental deficiency.....	9.88	10.29	18.43	13.78	3.47	6.17	4.97	10.14	6.83	12.74
Epilepsy.....	3.04	2.93	4.70	4.03	1.81	2.31	2.07	4.50	3.05	2.76
Mental alienation.....	3.02	3.22	3.23	3.63	1.89	3.26	1.24	1.98	1.96	2.56
Other.....	4.02	3.87	4.19	5.83	1.76	2.35	.83	2.90	3.47	2.09
Ear defects.....	15.56	12.45	7.87	13.49	12.60	6.08	15.52	16.32	18.40	12.95
Defective hearing.....	6.86	6.18	4.42	7.29	5.51	3.60	8.69	9.99	7.49	7.15
Otitis media.....	7.89	5.53	3.25	5.49	5.43	2.10	4.55	4.88	9.62	4.72
Other ear diseases.....	.81	.74	.20	.71	1.60	.38	2.28	1.45	1.29	1.08
Veneral diseases.....	5.80	3.38	25.55	8.08	4.53	3.48	8.73	2.89	4.44	3.57
Gonorrhea.....	3.50	1.92	15.57	4.18	3.20	2.02	2.07	1.75	3.19	2.56
Syphilis.....	2.20	1.41	8.92	3.55	1.33	1.44	1.66	1.14	1.16	1.01
Chancroid.....	.10	.05	1.06	.35		.02			.09	
Varicose veins, varicocele.....	8.09	7.73	4.70	5.36	4.76	3.34	6.00	9.68	6.17	2.09
Goiter.....	11.63	8.18	1.48	8.17	8.76	2.33	6.42	1.60	2.16	1.15
Hypertrophic tonsillitis.....	3.19	1.58	4.80	7.16	1.23	1.90	3.52	6.71	5.20	3.44
Arthritis and allied affections.....	3.60	2.96	4.92	3.51	1.89	2.19	2.48	2.59	1.65	2.83
Asthma.....	2.16	1.57	2.09	2.22	1.69	1.66	1.66	2.44	.92	1.96
Other diseases or defects.....	31.35	29.62	31.54	31.05	19.17	21.51	32.08	48.11	37.20	27.71
All diseases or defects.....	478.27	342.82	338.00	384.99	339.08	238.52	367.76	514.06	426.93	328.59

TABLE 7.—Prevalence of defects (per 1,000 total drafted men) noted in men who were rejected or accepted for limited service, by State—Continued

Diseases or defects	New York	North Carolina	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota
Orthopedic impairments.....	115.33	108.56	76.98	107.86	75.20	194.85	110.32	208.61	99.67	104.10
Crippled or paralyzed members.....	38.54	46.80	30.53	42.30	37.40	48.36	41.52	75.78	42.85	43.16
Lost members:										
Upper extremities:										
Fingers.....	5.10	5.09	3.61	7.53	3.46	8.01	5.18	8.72	4.62	6.56
Other.....	1.22	1.90	1.68	1.68	1.61	1.25	1.97	2.03	2.00	.79
Lower extremities.....	3.19	4.05	3.47	5.76	4.24	4.32	5.31	5.64	3.57	2.84
Flat feet.....	32.36	22.72	20.18	28.40	14.26	106.42	23.82	73.10	21.83	31.16
Other specified foot defects.....	27.54	22.04	12.53	15.37	9.21	18.52	26.56	34.42	19.38	11.74
Curvature of the spine.....	7.38	5.96	4.98	6.82	5.02	7.97	5.96	8.92	5.42	7.85
Eye defects.....	92.89	43.37	36.18	47.05	45.75	52.90	59.88	97.02	40.78	44.75
Defective vision.....	79.64	31.56	23.80	36.02	25.38	39.10	46.61	79.06	27.66	34.52
Blindness in one or both eyes.....	6.79	6.89	7.79	6.52	9.64	10.29	7.06	8.59	5.37	4.95
Trachoma.....	1.26	.22	2.91	.27	6.64	.62	.35	2.16	.71	1.85
Other eye defects.....	5.20	4.70	1.68	4.24	4.09	2.89	5.86	7.21	7.04	3.43
Cardiovascular-renal diseases.....	58.47	37.79	31.66	42.20	33.95	81.81	52.28	65.94	37.66	48.27
Valvular diseases of the heart.....	36.48	21.07	18.78	23.99	17.78	62.61	27.78	40.51	17.72	24.60
Cardiac hypertrophy.....	4.69	3.33	3.19	3.73	1.98	5.79	5.32	4.98	4.94	3.59
Tachycardia.....	4.03	4.94	2.07	4.82	3.73	4.68	6.63	3.08	5.11	9.30
Functional heart diseases.....	4.80	1.28	2.60	2.27	2.80	1.16	4.91	4.39	2.28	2.14
Other.....	8.47	7.17	5.02	7.39	7.64	7.57	7.64	12.98	7.61	8.64
Underweight.....	41.82	28.95	9.86	25.73	19.50	19.24	28.34	106.33	40.95	11.15
Hernia and inguinal rings.....	27.87	21.91	15.23	21.52	25.18	48.35	30.99	28.91	23.35	17.78
Hernia.....	19.15	18.63	13.37	16.82	22.71	29.03	24.80	24.71	20.50	15.83
Enlarged rings.....	8.72	3.28	1.86	4.70	2.47	19.32	6.19	4.20	2.85	1.95
Tuberculosis (all forms) actual or suspected.....	25.88	27.54	12.49	21.44	19.79	26.40	21.38	41.69	19.29	17.97
Defective and deficient teeth.....	46.13	17.07	19.02	14.62	6.95	27.38	29.08	79.26	18.81	20.91
Nervous or mental diseases.....	22.45	36.29	16.82	24.06	23.36	21.24	22.82	32.78	33.70	20.88
Mental deficiency.....	8.46	21.19	9.41	11.11	13.85	8.42	10.35	15.08	17.86	13.49
Epilepsy.....	4.58	4.91	2.46	4.43	3.66	2.94	4.06	6.23	3.71	.96
Mental alienation.....	5.01	4.18	2.11	4.00	2.80	4.36	3.59	4.52	5.02	3.00
Other.....	4.40	6.01	2.84	4.52	3.05	5.52	4.82	6.95	7.11	3.43
Ear defects.....	22.99	9.46	13.79	13.42	13.70	16.52	19.63	29.56	8.37	13.16
Defective hearing.....	8.39	7.05	6.39	6.04	7.05	7.30	6.16	13.44	5.88	6.86
Otitis media.....	13.06	2.02	6.14	6.70	5.97	5.66	12.50	15.14	1.78	5.18
Other ear diseases.....	1.54	.39	1.26	.68	.68	3.56	.97	.98	.71	1.12
Venereal diseases.....	4.15	10.52	.95	4.70	6.95	4.50	5.43	5.83	12.98	3.82
Gonorrhea.....	2.40	6.75	.56	2.92	2.98	3.61	3.41	3.54	7.68	2.04
Syphilis.....	1.61	3.55	.28	1.74	3.91	.89	1.82	2.29	4.83	1.75
Chancroid.....	.14	.22	.11	.04	.092047	.03
Varicose veins, varicocoe.....	7.44	7.01	5.51	5.92	4.08	9.04	5.45	12.65	5.69	3.56
Goiter.....	4.03	3.10	4.70	7.77	1.67	16.61	8.45	2.16	2.86	4.81
Hypertrophic tonsillitis.....	9.84	4.76	2.11	2.31	4.86	.94	9.92	8.46	5.83	1.91
Arthritis and allied affections.....	2.38	5.06	1.58	2.79	2.85	5.12	2.37	3.02	4.43	3.59
Asthma.....	2.07	2.62	1.65	1.98	1.87	2.76	2.12	4.06	2.71	3.10
Other diseases or defects.....	43.30	35.25	27.48	32.16	26.74	42.62	43.09	92.83	43.90	33.47
All diseases or defects.....	527.04	399.26	276.01	375.53	312.38	570.18	451.55	819.11	400.98	353.23

Diseases or defects	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming
Orthopedic impairments.....	105.59	61.79	164.29	174.59	112.34	204.13	92.99	132.20	81.23
Crippled or paralyzed members.....	46.13	31.06	43.81	53.37	51.69	43.98	41.59	39.02	32.99
Lost members:									
Upper extremities:									
Fingers.....	4.27	2.46	4.01	9.58	5.01	9.94	4.37	6.96	4.06
Other.....	1.92	1.91	1.06	3.99	1.78	2.34	1.73	1.41	.83
Lower extremities.....	4.29	3.51	4.51	5.99	4.59	4.83	5.80	3.16	3.65
Flat feet.....	22.01	13.52	80.42	55.97	18.64	118.32	12.64	57.39	29.59
Other specified foot defects.....	19.62	5.98	20.03	35.51	23.63	18.80	20.79	15.62	6.55
Curvature of the spine.....	7.35	3.35	10.45	10.18	7.00	5.92	6.07	8.64	3.56
Eye defects.....	47.64	40.87	38.87	82.21	47.69	52.73	47.20	49.17	26.60
Defective vision.....	31.27	26.48	26.22	67.84	31.60	41.27	30.65	39.98	18.23
Blindness in one or both eyes.....	10.60	8.90	9.58	9.48	8.73	8.99	7.70	5.11	5.22
Trachoma.....	1.30	1.83	.25	.10	.68	.47	1.94	.37	.60
Other eye defects.....	4.47	3.66	2.82	4.79	6.68	2.00	6.91	3.71	2.65
Cardiovascular-renal diseases.....	44.01	27.32	75.92	72.52	62.88	107.65	33.14	40.14	23.46
Valvular diseases of the heart.....	25.83	14.35	56.14	41.20	26.73	83.02	16.10	22.31	15.42
Cardiac hypertrophy.....	3.49	2.19	4.07	3.19	6.72	9.37	8.60	3.85	8.98

TABLE 7.—Prevalence of defects (per 1,000 total drafted men) noted in men who were rejected or accepted for limited service, by State—Continued

Diseases or defects	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming
Cardiovascular-renal diseases—Con.									
Tachycardia	4.42	2.86	5.32	7.58	12.53	6.34	4.37	4.91	1.08
Functional heart diseases	2.91	2.29	1.94	1.60	9.42	1.18	5.01	1.62	.83
Other	7.36	5.63	8.45	18.95	7.48	7.74	4.06	7.45	2.15
Underweight	46.12	23.87	24.35	54.57	28.23	20.47	14.66	22.52	11.60
Hernia and inguinal rings	23.17	21.09	28.23	43.59	34.83	28.72	30.19	26.57	22.13
Hernia	21.41	19.30	16.15	32.02	26.70	23.00	22.23	20.26	18.43
Enlarged rings	1.76	1.79	12.08	11.57	8.13	5.72	7.96	6.31	3.66
Tuberculosis (all forms), actual or suspected	29.03	22.07	15.58	20.63	30.63	27.92	17.03	19.58	12.10
Defective and deficient teeth	11.04	5.91	18.71	102.85	21.33	22.91	13.21	16.03	9.28
Nervous or mental diseases	35.41	18.96	15.33	58.45	39.98	18.47	20.59	23.20	10.03
Mental deficiency	21.87	9.26	7.07	32.12	25.14	8.12	12.06	12.10	3.65
Epilepsy	3.64	4.64	2.69	10.47	4.86	3.23	3.21	3.40	1.57
Mental alienation	4.12	2.17	2.63	7.78	3.84	3.63	1.99	3.29	2.74
Other	5.78	2.89	2.94	8.08	6.14	3.49	3.33	4.41	2.07
Ear defects	12.53	10.15	18.09	18.26	11.32	18.95	13.11	13.67	9.53
Defective hearing	7.20	5.81	9.33	11.97	6.65	9.52	5.51	6.83	2.98
Otitis media	4.69	3.80	6.95	4.49	4.06	6.72	6.93	6.26	5.22
Other ear diseases	.64	.54	1.81	1.80	.61	2.71	.67	.58	1.33
Veneral diseases	9.87	5.90	2.94	4.99	10.97	5.60	7.95	4.04	3.48
Gonorrhea	6.35	3.22	1.38	3.59	7.03	3.71	5.73	3.02	1.41
Syphilis	3.09	2.37	1.56	1.40	3.42	1.80	1.66	1.02	2.07
Chancroid	.43	.31			.52	.09	.26		
Varicose veins, varicocele	5.61	3.73	6.45	12.77	7.70	8.79	6.67	8.44	2.82
Goiter	4.62	.88	15.40	6.98	8.41	16.57	9.18	16.03	2.32
Hypertrophic tonsillitis	3.28	.61	6.26	15.16	12.14	1.31	7.97	8.99	2.49
Arthritis and allied affections	3.32	2.76	3.13	3.09	6.05	3.11	3.72	3.48	1.66
Asthma	2.22	1.87	1.13	8.68	3.14	2.07	2.14	2.25	1.99
Other diseases or defects	45.50	28.51	30.23	67.64	50.36	33.26	35.00	30.97	19.81
All diseases or defects	428.96	276.29	464.91	755.98	488.00	572.66	354.75	417.28	239.53

From earlier discussions in this article, it is apparent that much uncertainty attaches to the question of the number of defects which will be noted, State by State, among persons classified as not available for general military service under the administration of the present conscription law. But, although it is not clear to what extent the findings of the 1917-18 draft in each State will be repeated in the present instance, it is equally clear that there is no other basis on which to make reasonable estimates. National estimates were given at the beginning of the article. If a person desires to make similar estimates by impairments for individual States, he can do so from table 7, providing the number of men to be examined in the given State is known. The procedure would be to multiply this number of men to be examined by the rates for each diagnosis group for that State (dividing by 1,000 to place the calculation on a per person basis).¹²

¹² If it is desired to make the calculation from the quotas of men to be inducted (as, for example, those given in footnote 3), the procedure would be to divide the quota by 1 minus the proportion of men classified as not available for general military service (expressed per person, i. e., figures from table 6 for the given State divided by 100). The quotient is then the estimated number of examinations necessary to produce the quota.

By way of example, the New York quota (footnote 3) is 114,796. Table 6 gives, for that State, 39.5 as the percentage not available for general military service. Hence, the estimated number to be examined would be 114,796 divided by 1 minus 0.395, or 189,620.

SUMMARY

1. In connection with a suggested program of physical rehabilitation of registrants disqualified for general military service under the conscription act of 1940, the medical findings of the World War draft of 1917-18 ("second million") have been summarized.

2. Twenty-one percent were rejected for military service, 31 percent were classified as not available for general military service (including the rejections), and 52 percent had one or more recorded defects.

3. On the basis of the World War draft of 1917-18, one might expect that, to meet the quota of 800,000 inducted men by July 1, 1941, 1,200,000 would have to be examined and thus that about 400,000 would not be available for general military service.

4. On the same basis, the estimated number of defects to be found among these 400,000 persons is given, the most frequently occurring conditions which are largely remediable being defective vision, underweight, tuberculosis, defective and deficient teeth, hernia, and venereal diseases.

5. Again on the same basis, estimated numbers of persons in each State who will be classified as not available for general military service are also given, with the percentages. There is wide variation from State to State in the percentages.

6. Data are presented to permit estimates of the number of defects of different kinds which will be found among persons examined in each State.

APPENDIX

SECTION A

Calculation of percentage of persons placed in each physical status group

As specified in the text, this analysis is confined to "second million" (plus local board) examinations. The method of combining these two sources of information is most easily explained by indicating the precise calculations, as done in table 8.

TABLE 8.—*Calculation of percentage of persons placed in physical status groups*

Item	Line	Number
LOCAL BOARDS		
Number of local board examinations ^a	1	3,764,101
Number of rejections by local boards ^a	2	549,099
Number placed in limited service groups ^b ^c	3	427,813
Number who did not reach camp ("DNRC") ^b ^d	4	290,458
Number who did reach camp ("RC") ^b	5	128,355
Number rejected at camp ^b	6	16,488
Number in "second million" ^e	7	74,242
Estimated distribution at camp:		
General service (with defects) ^f	8	23,241
Limited service ^g	9	41,464
Rejected ^h	10	9,537
Total number rejected or placed in limited service groups ⁱ	11	976,912
Difference between this number and number examined ^j	12	2,787,189

See footnotes at end of table.

TABLE 8.—*Calculation of percentage of persons placed in physical status groups—Continued*

Item	Line	Number
CAMPS		
Number of "first million" examinations ^a	13	994,206
Number of "second million" examinations ^a	14	967,486
Number from which "second million" was drawn ^a	15	1,672,661
Remaining ^a ^k	16	548,135
Classification of "second million" examinations:		
Total accepted for general service:		
With no defects ^a	17	577,603
With defects ^a	18	262,950
Accepted for limited service ^a	19	41,464
Rejected ^a	20	85,469
Less "DNRC":		
Accepted for general service:		
With no defects ^a	21	577,603
With defects ^a	22	239,709
Accepted for limited service ^a	23	0
Rejected ^a	24	75,932
Sum ^a	25	893,244
EXPRESSION IN TERMS OF FULL UNIVERSE OF DISCOURSE		
Rejections:		
Local boards (line 2).....	26	549,099
Camps:		
Except "DNRC" ^a	27	236,931
"RC" (line 6).....	28	16,438
Total ^a	29	802,518
Percentage of line 1.....	30	21.3
Placed in limited service groups:		
"DNRC" (line 4).....	31	299,458
"RC" ^a	32	71,686
Total ^a	33	371,144
Percentage of line 1.....	34	9.9
Accepted for general service with defects:		
Camp:		
Except "DNRC" ^a	35	747,964
"RC" ^a	36	40,181
Total ^a	37	788,145
Percentage of line 1.....	38	20.9

^a From "Defects Found in Drafted Men," op. cit.

^b From Provost Marshal General's Second Report, op. cit.

^c The "remediable" group has been combined with the "limited service" group, since men were transferred from the former to the latter before being sent to camp. Only a nominal number of persons were placed in the "remediable" group at the camps.

^d "DNRC" is used in this explanation for the group of persons who were placed in limited service groups by local boards, but who did not reach camp (by Sept. 11, 1918); "RC" is used for those so classified who did reach camp.

^e Line 5 times $\frac{\text{line 14}}{\text{line 15}}$. Only a few persons from limited service groups reached camp soon enough to be included in the "first million"; hence, the estimated number to be found in the "second million" depends on the proportion which the "second million" was of the sample from which it was drawn.

^f Line 7 minus the sum of lines 9 and 10.

^g From line 19. All persons classified at camp as limited service are assumed to have been so classified by local boards.

^h Line 6 times $\frac{\text{line 14}}{\text{line 15}}$. See note (e).

ⁱ Line 2 plus line 3.

^j Line 1 minus line 11.

^k Includes line 4.

^l Line 18 minus line 8.

^m Entire group classified as having been placed in limited service group by local boards ("RC"). See line 9.

ⁿ Line 20 minus line 10

^o Sum of lines 21-24.

^p Line 24 times $\frac{\text{line 12}}{\text{line 25}}$.

^q Sum of lines 26-28.

^r Line 9 times $\frac{\text{line 15}}{\text{line 14}}$.

^s Sum of lines 31 and 32

^t Line 22 times $\frac{\text{line 12}}{\text{line 25}}$.

^u Line 8 times $\frac{\text{line 15}}{\text{line 14}}$.

^v Sum of lines 35 and 36.

By way of explanation, it should be stated that examination records of persons placed in limited service groups by local boards were not available for the analyses covered in the report, "Defects Found in Drafted Men." Of this group, those who later reached camp were reexamined there and their records are included, if they were in the "second million"; however, only part of the limited service group ever got to camp. Those who did, did not do so early enough to be included, in any numbers, in the "first million." Hence, they form a disproportionate part of the "second million" and require a factor to "step up" the records to the full universe of discourse (i. e., local board examinations).

SECTION B

Calculation of the prevalence of specific defects (per 1,000 total drafted men) noted in men who were placed in each physical status group

Calculations of the rates of defects followed the methods described in section A, the number of cases found at camp for any one defect being "stepped up" to the full universe of discourse just as the persons among whom these cases occurred had been "stepped up."

In view of the fact, however, that no information as to diagnosis was available for men who had been placed in limited service groups by local boards, a further assumption was necessary. It was that the relative distribution of different impairments in the limited service groups as found at camp could be taken to represent the relative distribution at the local boards.

The complete calculation is shown in table 9 for one defect (hernia).

TABLE 9.—*Calculation of rates of hernia (per 1,000 drafted men) among persons classified by physical status. (Hernia used as an example of the procedure)*

Item	Line	Number
LOCAL BOARDS		
Number of local board examinations ^b	1	3,764,101
Number of cases found among rejected men ^a	2	21,275
Number of persons classified as "DNRC" ^{b d}	3	299,458
CAMPS		
Number of cases found:		
Among rejected men ^a	4	11,076
Among men placed in limited service groups <i>at camp</i> ^a	5	2,768
Among men accepted for general service ^a	6	8,284
EXPRESSION IN TERMS OF FULL UNIVERSE OF DISCOURSE		
Among rejected men:		
Local boards (line 2).....	7	21,275
Camps ^a	8	32,841
Sum of lines 7 and 8.....	9	54,116
Rate (per 1,000 drafted men).....	10	14.39

See footnotes at end of table.

TABLE 9.—*Calculation of rates of hernia (per 1,000 drafted men) among persons classified by physical status. (Hernia used as an example of the procedure)—Con.*

Item	Line	Number
EXPRESSION IN TERMS OF FULL UNIVERSE OF DISCOURSE—continued		
Among men placed in limited service groups ^f	11	21,776
Rate (per 1,000 drafted men).....	12	6.53
Among men accepted for general service ^g	13	21,830
Rate (per 1,000 drafted men).....	14	6.60

^a From "Defects Found in Drafted Men," op. cit.

^b From Provost Marshal General's Second Report, op. cit.

^c From table 8, line 1.

^d From table 8, line 4. See note (d) of that table for definition of symbols "DNRC" and "RC."

^e Line 4 times 2.9651. This factor, applicable to each diagnosis, equals the following (from table 8):

$$\left(\frac{\text{line 24} \times \text{line 12}}{\text{line 20} \times \text{line 25}} \right) + \left(\frac{\text{line 10} \times \text{line 15}}{\text{line 20} \times \text{line 14}} \right)$$

^f Line 5 times 8.9510. This factor, applicable to each diagnosis, covers the "DNRC" group and also persons classified as available for limited service at camp. It is equal to the following (from table 8):

$$\frac{\text{line 4}}{\text{line 9}} + \frac{\text{line 15}}{\text{line 14}}$$

^g Line 6 times 2.9973. This factor, applicable to each diagnosis, equals the following from table 8:

$$\left(\frac{\text{line 22} \times \text{line 12}}{\text{line 18} \times \text{line 25}} \right) + \left(\frac{\text{line 8} \times \text{line 15}}{\text{line 18} \times \text{line 14}} \right)$$

SECTION C

Calculations by States

Since, for each State, information was not available as to the proportion who reached camp out of those who were placed in limited service groups by local boards, the national proportions were necessarily used in arriving at the percentage of persons placed in the different physical status groups in each State (table 6.)¹³

¹³ The value, for any State, corresponding to that given on line 28 of table 8 was obtained by multiplying the number placed in limited service groups by local boards in the given State by $\frac{16,488}{427,813}$.

The value, for any State, corresponding to that given on line 27 of table 8 was obtained by (a) multiplying the above product by $\frac{967,486}{1,672,661}$, (b) subtracting the result from the number rejected at camp for the given State, and finally (c) multiplying the difference by a separate factor for each State. This factor has for its numerator the value, for the given State, corresponding to line 12 of table 8, and for its denominator the difference between (1) the number examined at camp ("second million") in the given State and (2) the number placed in limited service groups by local boards times $\frac{128,355}{427,813}$ times $\frac{967,486}{1,672,661}$.

The value, for any State, corresponding to that given on line 31 of table 8 was obtained by multiplying the number who were placed in limited service groups by local boards in each State by $\frac{299,458}{427,813}$.

The value, for any State, corresponding to that given on line 32 of table 8 was obtained by multiplying the number placed in limited service groups at camp in the given State by $\frac{1,672,661}{967,486}$.

The value, for any State, corresponding to that given on line 36 of table 8 was obtained by subtracting the calculated value corresponding to line 32 from the product of (a) the number of persons placed in limited service groups by local boards in the given State and (b) the factor $\frac{111,867}{427,813} \left(\text{i. e., } \frac{128,355 - 16,488}{427,813} \right)$.

The value, for any State, corresponding to that given on line 35 of table 8 was obtained by (a) multiplying the calculated value corresponding to line 36 by $\frac{967,486}{1,672,661}$, (b) subtracting the product from the number of persons found at camp to be available for general military service, with defects, and (c) finally multiplying this difference by the factor mentioned in connection with the calculation for line 27.

In the calculation of table 7, the factor given in footnote e of table 9 was used without change, as a convenient approximation. However, the factor given in footnote f of table 9 was modified by substituting, for the first term, the product of (a) $\frac{299,458}{427,813}$ and (b) the quotient obtained by dividing the number of men placed in limited service groups *by local boards* in the given State by the number placed in limited service groups *at camp* for the given State.

REPORT OF A NEW TYPE OF PNEUMOCOCCUS WHICH CROSSES WITH TYPES X, XI, XX, XXIX, AND XXXI ANTIPNEUMOCOCCIC SERUMS¹

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During the pneumococcus type incidence survey conducted recently in northern California by the United States Public Health Service in cooperation with the California State Department of Public Health, it was observed that certain pneumococci reacted with more than one type-specific serum. In this survey, which covered 23 counties in northern California, one or more specimens of sputum, other biological fluids, or cultures, from 1,096 patients were examined at the State public health laboratory at Berkeley to determine the presence of significant organisms, and to type pneumococci whenever these were present. Most of the patients were proved cases of pneumonia. Specimens from 255 cases were sent to the State laboratory for a primary diagnosis. The specimens from 841 cases had already been examined by a hospital or private clinical laboratory and were brought to the State laboratory by messenger for checking or further study. This phase of the survey covered the period from January 20, 1939, to April 30, 1940.

The method used for examining the sputums, other biological fluids, or cultures, was as follows: The specimen was examined by the Neufeld method to determine the presence and type of pneumococcus. If no swollen capsules were observed the material was injected intraperitoneally into a white mouse and/or a blood agar plate was streaked, or dextrose blood broth or dextrose ascites broth was inoculated with the material being tested.

The technique of the Neufeld test was that described by Walter (5). A small (1 mm.) loopful of the specimen was placed on a flat glass slide and a large (4 mm.) loopful of serum and a large loopful of Loeffler's methylene blue were mixed with it. A coverslip was

¹ From the Division of Laboratories, California State Department of Public Health, and the Divisions of Public Health Methods and Biologics Control, National Institute of Health.

placed over the mixture at once. The preparation was examined under the oil immersion lens with a strong light partially dimmed.

All specimens were tested with each of the diagnostic group serum mixtures, and then with each specific type serum included in any group mixture which caused capsular swelling or agglutination of the pneumococci. In the case of specimens in which specific types had been reported by the hospital or private laboratory which submitted the specimen, if the group serum mixture containing a reported type caused no capsular swelling or agglutination, the organism was tested with the specific serum of the type reported.

The mice were inoculated intraperitoneally with 0.25 cc. to 0.5 cc. of sputum or culture. If the mice survived 12 to 24 hours after inoculation, but were moribund, they were killed. Otherwise, they were allowed to live for 5 or 6 days before they were sacrificed. From a few such mice which had never shown signs of illness, positive brain and heart blood cultures were obtained. Peritoneal punctures were not routinely made.

Following the death of a mouse, Neufeld tests were performed on the peritoneal fluid, and cultures were made from the peritoneal fluid, heart blood, and brain. The peritoneal fluid was streaked over a blood agar plate and the heart blood and brain were cultured in broth enriched with either blood or ascites fluid. If growth was obtained, the cultures were tested by the Neufeld method.

The media were prepared according to the methods described by Walter (5). Horse blood was used for the blood agar plates. A 20-percent solution of dextrose was added to the broth in amounts sufficient to make 0.5 percent. Either horse blood or ascites fluid was used for further enrichment. These seemed equally effective.

The first multiple reaction observed was one in which the organisms exhibited swollen capsules with both type XX and type XXIX serums. This reaction was obtained both by a Neufeld test performed directly on the sputum and with organisms obtained from a blood agar plate which had been streaked with the sputum.

Later, other specimens were encountered which reacted with two or more of the diagnostic antipneumococcic serums, types X, XX, XXIX, and XXXI. In every case the possibility of the mixture of these types was excluded. Only one specimen was recorded as reacting with types X, XI, XX, XXIX, and XXXI. At the time, this specimen was believed to contain a type XI pneumococcus in addition to the multiple reacting pneumococcus.

Most of the multiple reacting pneumococci were noted in direct examination of sputum. During the last 2 months of the survey, whenever reactions with one of the types X, XX, XXIX, or XXXI serums occurred, each specimen in which one of these types was found was also examined for the remaining three types. The number

of specimens containing pneumococci which reacted with these types is given in table 1.

TABLE 1.—Cases from which were obtained specimens¹ containing pneumococci which reacted with more than 1 type-specific serum

Types found ²	Number of cases	Types found ²	Number of cases
X, XXIX.....	6	X, XX, XXXI.....	4
XX, XXIX.....	4	X, XX, XXIX, XXXI.....	7
XX, XXXI.....	3	X, XI, XX, XXIX, XXXI.....	1
XXIX, XXXI.....	1	Total.....	33
X, XX, XXIX.....	7		

¹ The 33 original specimens, obtained from the same number of cases, consisted of 29 sputums, 2 throat cultures, 1 lung puncture fluid, and 1 blood culture.

² In 24 of the 33 cases these types were found in the original specimen by the Neufeld technique. In the remaining 5 cases the pneumococci were demonstrated only by mouse inoculation or in broth culture or both.

The 4 types were also found singly in specimens. Type X alone was present in 12 specimens, type XX in 23, type XXIX in 7, and type XXXI in 14. In addition, one of these 4 types was found in combination with one or more other types in 20 specimens.

The incidence of these types and the multiple reacting type which we have listed as "odd" is given in table 2. It will be noted that the incidence of the multiple reacting pneumococci (4.2 percent of all types and 4.9 percent of the higher types) exceeds any one of the four types in the survey in California.

TABLE 2.—Incidence of the multiple reacting pneumococci and 4 types with which they crossed

	Number	Percent of all types	Percent of higher types
Total number of cases from which specimens were examined.....	1,096		
Number of cases from which specimens were positive for pneumococci.....	789		
Number of cases from which specimens contained only higher types of pneumococci.....	675	85.6	
Number of cases from which specimens contained only:			
Type X pneumococci.....	12	1.5	1.8
Type XX pneumococci.....	23	2.9	3.4
Type XXIX pneumococci.....	7	.9	1.0
Type XXXI pneumococci.....	14	1.8	2.1
Types X, XX, XXIX, or XXXI, plus other types.....	20	2.5	3.0
"Odd".....	33	4.2	4.9

Table 3 gives the form of illness of patients harboring the multiple reacting pneumococci, the outcome of their illness, and the results of the original laboratory examinations.

TABLE 3.—Summary of cases in which multiple reacting pneumococci were found

Case No.	Race	Sex	Age	Diagnosis	Complications	Outcome	Specimen	Date specimen received	Types found by ¹ —		
									Direct test	Mouse inoculation	Broth culture
1	W	M	65	Bronchopneumonia.	Mastoiditis, bilat.	Recovered	Sputum.	1939	XXIX, XX	Not done	Not done.
2	W	F	6	Bronchopneumonia (post measles).		do	Throat culture.	Jan. 26	XXIX, XX	do	Do.
3	W	M	70	Bronchopneumonia.	Cerebral hemorrhage.	Died	Lung puncture fluid.	Feb. 18	XXIX, XX	do	Do.
4	W	M	39	do		Recovered	Sputum.	Feb. 27	XVIII, X-XX-XXIX	do	Do.
5	W	M	68	do	Fracture of femur.	do	do	Mar. 29	III, XX-XXXI	do	Do.
6	W	M	69	do	Chronic alcoholism.	do	do	Apr. 17	XXIX, XX-XXXI	do	Do.
7	W	M	73	do	Lung abscess.	do	do	Apr. 18	XX, XX-XXXI	do	Do.
8	W	M	50	Lobar pneumonia.		do	do	June 2	XXIV, XXIX-X	XXIV-X-XXIX	None.
9	W	F	29	Bronchopneumonia.		do	do	July 25	XX, X-XXIX-X	Not done.	XXIX, X-XX-XXXI-XI
10	W	M	45	Lobar pneumonia.	Empyema.	do	do	Aug. 2	None	X-XXIX	XXIX, X
11	W	M	35	Pneumonia.		do	do	Aug. 4	XXIX, X-XX	XXIX, X-XX	XXIX, X-XX.
12	W	M	45	Lobar pneumonia.		do	do	Aug. 29	None	X, XX-XXIX	None.
13	W	M	61	Bronchopneumonia.		do	do	Aug. 31	X-XXIX	Not done	Do.
14	W	F	26	Bronchopneumonia.		do	do	Oct. 20	X-XX-X-XXIX	Do.	Do.
15	W	M	67	do		do	do	Oct. 23	X-XXIX	Not done	X-XXIX.
16	W	M	40	Bronchopneumonia.	Ruptured spleen.	Died	do	Oct. 30	X-XX-X-XXIX	do	XX, X-XXIX-XXXI.
17	W	M	48	Lobar pneumonia.		do	Blood culture.	Dec. 13	XXIX, XX	do	Not done.
18	W	M	61	Bronchopneumonia.		Recovered	Sputum.	Dec. 19	X-XX-XXIX-XXXI	X-XX-XXIX-XXXI	X-XX-XXIX-XXXI.
19	W	M	36	Lobar pneumonia.		do	do	Dec. 23	X-XX-XXXI	Not done	X-XX-XXXI.
20	W	F	53	Bronchopneumonia.		do	do	Dec. 27	X-XX-XXXI.	do	X-XX-XXXI.
21	W	M	38	Lobar pneumonia.		do	do	1940	XXIX, X-XX.	do	XXIX, X-XX.
22	W	M	23	Hypostatic pneumonia.	Fractured vertebra.	Died	do	Jan. 6	None.	X-XXIX	Not done.
23	W	M	43	Pneumonia.		Recovered	do	Jan. 18	X-XX-XXXI.	Not done.	X-XX-XXXI.
24	W	F	16	Lobar pneumonia.		do	do	do	XXIX	do	XXIX-XXXI.
25	W	M	60	Bronchopneumonia.		do	do	Jan. 25	XXIX, X-XX-XXXI	X-XX-XXXI-XXXI	X-XX-XXXI-XXXI.
26	W	M	45	Lobar pneumonia.		do	do	Jan. 29	X-XX-XXXI	X-XX-XXXI-XXXI	X-XX-XXXI-XXXI.
27	W	M	51	Bronchopneumonia.		do	do	Mar. 2	X-XX-XXXI	X-XXIX	X-XXIX.
28	W	F	69	do		do	do	Mar. 8	XXIX, X	X-XXIX	X-XXIX.
29	W	M	1	Lobar pneumonia.	Otitis media.	do	Throat culture.	Mar. 14	XX-XXXI	XX-XXXI	Not done.
30	W	F	34	Bronchopneumonia.		do	Sputum.	Mar. 15	None.	X-XX-XXXI-XXXI	X-XX-XXXI-XXXI.
31	W	F	58	Lobar pneumonia.		do	do	Mar. 18	X	X-XXIX-XXXI	X-XX-XXXI-XXXI.
32	W	F	36	Post-pneumonic the.		do	(See text)	Mar. 22	None.	X-XX-XXXI-XXXI	X-XX-XXXI-XXXI.
33	W	M	50	Bronchopneumonia		do	Sputum	Apr. 30	XXIX	XXIX, X-XX	XXIX, X-XX.

¹ Whenever any one type was designated as predominating it is placed first and separated from the others by a comma. When no type seemed to predominate, the types are separated by a dash.

In cases Nos. 1 to 7, inclusive, the findings were confirmed by blood agar plates.

The recorded findings for each of cases Nos. 16 and 25 are the composite of the findings in two specimens.

A careful study of these pneumococci was not undertaken until late in the pneumococcus type survey. The first strains of multiple reacting pneumococci had not been kept. However, 2 strains of these pneumococci were isolated from the throats of 2 convalescent patients who had previously harbored pneumococci reacting with 4 type-specific serums, and 4 similar strains were isolated from new cases. A study of 5 of these strains forms the basis for our conclusions that the 5 strains are identical and that they represent a distinct type of pneumococcus which differs from all of the 32 recognized types but which gives cross reactions with types X, XI, XX, XXIX, and XXXI serums. One of the 6 strains which had been preserved in a dry state while immunization experiments were being carried on failed to grow when needed.

HISTORY OF THE 6 STRAINS

Strain 18 was isolated from the throat of a white male patient, aged 61 years, who was convalescing from an attack of bronchopneumonia. At the time of the acute illness, in December 1939, a positive Neufeld reaction had been observed on examination of the sputum with serums of types X, XX, XXIX, and XXXI, and pneumococci which reacted with serums of these 4 types had been isolated from the sputum. No pneumococci were seen in a direct examination of a throat swab made 10 weeks later from the convalescing patient. Pneumococci, however, grew in a dextrose broth culture made from the throat swab. These pneumococci exhibited swollen capsules with type XXXI serum. After passage through a mouse, they reacted with types X, XX, and XXIX serums as well as with serum of type XXXI.

Strain 25 was isolated from the throat culture of a white male patient, aged 60 years, 6 weeks after recovering from bronchopneumonia. Pneumococci had been found reacting to serums of types X, XX, XXIX, and XXXI in a Neufeld test on sputum obtained at the time of the acute illness in January 1940, and also in a dextrose broth culture of the sputum. This culture had not been saved. The throat culture was made in dextrose ascites broth. After 4 hours incubation, 2 mice were each inoculated with the culture. Pneumococci were not seen in the culture itself or on a blood agar plate streaked with the culture. The mice died, however, 24 hours after inoculation. An organism which was bile-soluble and which agglutinated with types X, XX, XXIX, and XXXI was isolated from each of the mice. Two mice were then inoculated with these cultures but they did not succumb. A subculture was made from one of the cultures obtained from the dead mice and mice inoculated with this culture died after 24 hours. The pneumococci isolated from these

mice and from subsequent mice through which the culture was passed reacted in different ways with the four type-specific serums. For example, some of the reactions were as follows: Swollen capsules with serums of types X, XXIX, and XXXI, and partially swollen capsules with type XX serum; swollen capsules with types X and XXIX, and agglutination with types XX and XXXI; swollen capsules with types X and XXIX, partially swollen capsules with type XXXI, and agglutination with type XX.

Strain 26 was recovered in January 1940 from sputum from a case of lobar pneumonia. The patient was a white man, aged 45. In a Neufeld test performed on the sputum, capsular swelling was produced by serums of types X, XX, XXIX, and XXXI. A mouse inoculated with the sputum did not succumb until the tenth day. Pneumococci were isolated from this mouse which at one time or another reacted with all 4 type-specific serums, types X, XX, XXIX, and XXXI.

Strain 30 was recovered from the sputum of a white woman, aged 34 years, who had bronchopneumonia. A Neufeld test performed on the sputum, which was obtained on the sixth day of illness, did not reveal the presence of a pneumococcus. However, a dextrose broth culture made from the sputum contained a pneumococcus whose capsules were swollen by serums of types X and XX. After one mouse passage, agglutination or capsular swelling was observed with serums of types X, XX, XXIX, and XXXI.

Strain 31 was from a case of lobar pneumonia in a white woman, aged 58. A Neufeld test performed on the sputum obtained on the third day of illness showed the presence of a pneumococcus with partially swollen capsules with type X serum. A dextrose broth culture made from the sputum and cultures from mice which had been inoculated with the sputum contained pneumococci which reacted with all four types of serum.

Strain 32 was isolated from fluid obtained from a draining sinus from the right lung of a white woman, aged 36, who was suspected of having tuberculosis. The patient had bronchopneumonia 5 years previously, following which she developed symptoms of tuberculosis. Many specimens of drainage fluid and sputum had been examined for tubercle bacilli at the State laboratories, but all were negative. One specimen contained a gram-positive diplococcus which proved to be a multiple reacting pneumococcus. This strain of pneumococcus, at the time the cultures were received at the National Institute of Health, appeared to have a slightly better capsule than any of the other five strains. For this reason it was chosen as the strain for producing immune serum in rabbits. After a few mouse passages, no differences in the size of the capsules of the different strains could be detected.

Virulence.—All of the six cultures were virulent for mice at the time of isolation, and, as a rule, the mice were dead 24 hours after inoculation. Exact tests for virulence were carried out on strains 18, 25, 30, 31, and 32 several months after the original isolations and after a number of mouse passages. These strains were highly virulent, as few as one pneumococcus being necessary to kill. As an example, the virulence test of strain 32 is given in table 4.

TABLE 4.—*Virulence test of pneumococcus strain 32*

Dose of pneumococci	Number of pneumococci per 1 cc. of culture dilution (determined by duplicate blood agar plates)	Death of mice, number of hours after inoculation	Dose of pneumococci	Number of pneumococci per 1 cc. of culture dilution (determined by duplicate blood agar plates)	Death of mice, number of hours after inoculation
1 cc. of 10^{-1} -----	-----	{ 19	1 cc. of 10^{-6} -----	{ 220	19
		{ 19		{ 270	30
1 cc. of 10^{-2} -----	-----	{ 19	1 cc. of 10^{-7} -----	{ 23	45
		{ 26		{ 27	45
1 cc. of 10^{-3} -----	-----	{ 26	1 cc. of 10^{-8} -----	{ 2	32
		{ 45		{ 3	45
1 cc. of 10^{-4} -----	-----	{ 32	1 cc. of 10^{-9} -----	{ 0	45
		{ 45		{ 0	(1)
1 cc. of 10^{-5} -----	-----	{ 26			
		{ 26			

¹ Survived.

The first questions to be answered regarding these multiple reacting pneumococci were: Are the strains immunologically identical? And do they belong to one of the four recognized types of pneumococci, types X, XX, XXIX, or XXXI, and only cross with the remaining three types?

For comparative purposes the test used at the National Institute of Health (4) for determining the potency of pneumococcus typing serums was used. It has been shown by one of us (B. E. E.) (1) that if the antigens are carefully prepared and standardized the results of these tests can be duplicated with reasonable accuracy. Tests were performed using antigens prepared from the homologous type pneumococci and from six strains of the multiple reacting pneumococci on diagnostic type-specific serums and upon concentrated rabbit serums prepared for therapeutic use by different commercial laboratories. The results are given in table 5. It will be observed that all six multiple reacting strains behaved in an identical fashion and that the extent of the cross reaction of the different commercial serums with the multiple reacting pneumococci depended largely upon the potency of the serum. There were exceptions, however, and these exceptions cannot at present be satisfactorily explained. They might be due to some difference in the type strain used for immunization or to some other variation of method of preparing the serum.

TABLE 5.—Quantitative Neufeld tests performed on commercial diagnostic and therapeutic antipneumococcal serums to determine the extent of the cross reactions

Antipneumococcal rabbit serums	Lot	Capsular swelling titers for—						
		Homol- ogous type pneu- moccus	Strain 32	Strain 18	Strain 25	Strain 26	Strain 30	Strain 31
Type X, diagnostic.....	D101	1:16+	<1:2					
	D102	1:16+	<1:2					
	D103	1:16	<1:2					
	D104	1:8	0					
	D105	1:16+	Agg.					
	D106	1:16	<1:2					
	D107	1:32+	<1:2					
	D108	1:8+	Agg.					
	D109	1:8+	Agg.					
	D110	1:16	0					
	D111	1:32	0					
Type X, therapeutic.....	T101	1:128	1:4	1:4	1:4	1:4	1:4	1:4
	T102	1:128	1:4+	1:4+	1:4+	1:4+	1:4+	1:4+
	T103	1:32	1:2+					
	T104	1:32	<1:4					
	T105	1:16+	<1:4					
Type XI, diagnostic.....	D201	1:32+	Agg.			Agg.		
	D202	1:16+	Partial agg. do.					
	D203	1:8						
	D204	1:16	0			0		0
	D205	1:16	0			0		0
	D206	1:16	Partial agg.			0		0
	D207	1:8	Do.					
	D208	1:16	Do.					
	D209	1:16	0					
	D210	1:16	Partial agg.					
	D211	1:32+	Agg.			Agg.		
	D212	1:64	0					
	D213	1:16	Partial agg. Do.					
	D214	1:8+	0					
	D215	1:8+	0					
	D216	1:32+	Partial agg.					
Type XI, therapeutic.....	T201	1:128	Agg.					
	T202	1:128	<1:4					
	T203	1:128	<1:4	<1:4	<1:4	<1:4	<1:4	<1:4
	T204	1:32+	Agg.					
	T205	1:16+	0					
Type XX, diagnostic.....	D301	1:16	Agg.					
	D302	1:8+	0					
	D303	1:16	0					
	D304	1:32	<1:2					
	D305	1:16+	Agg.					
	D306	1:32+	<1:2					
	D307	1:8+	Agg.					
	D308	1:16	0					
	D309	1:16	0					
Type XX, therapeutic.....	T301	1:128	<1:4	<1:4	<1:4	<1:4	<1:4	<1:4
	T302	1:128+	1:2					
	T303	1:128	<1:4					
	T304	1:32+	<1:4					
	T305	1:16+	0					
Type XXIX, diagnostic.....	D401	1:16+	1:2					
	D402	1:16+	1:2					
	D403	1:16+	1:2					
	D404	1:16	<1:2					
	D405	1:8+	<1:2					
	D406	1:16	<1:2					
	D407	1:16+	<1:2					
	D408	1:32	1:2					
	D409	1:32	<1:2					
	D410	1:32+	1:2					
	D411	1:16	<1:2					
	D412	1:8+	<1:2					
	D413	1:16+	<1:2					
Type XXIX, therapeutic....	T401	1:128+	1:8	1:8	1:8	1:8	1:8	1:8
	T402	1:128+	1:8					
	T403	1:64	1:2+					
	T404	1:32+	1:2+					
	T405	1:32+	1:2+					

TABLE 5.—Quantitative Neufeld tests performed on commercial diagnostic and therapeutic antipneumococcal serums to determine the extent of the cross reactions—Continued.

Antipneumococcal rabbit serums	Lot	Capsular swelling titers for—						
		Homologous type pneumococcus	Strain 32	Strain 18	Strain 25	Strain 26	Strain 30	Strain 31
Type XXXI, diagnostic.....	D501	1:16+	Agg.					
	D502	1:16+	Do.					
	D503	1:8+	Do.					
	D504	1:16	0					
	D505	1:8	0					
	D506	1:8	0					
	D507	1:16	0					
	D508	1:16	0					
	D509	1:8+	Partial agg.					
	D510	1:32	Agg.					
	D511	1:8+	0					
	D512	1:8+	0					
	D513	1:16+	0					
Type XXXI, therapeutic....	T501	1:128	<1:4	<1:4	<1:4	<1:4	<1:4	<1:4
	T502	1:128	<1:4					
	T503	1:32	<1:4					

Agg.=Agglutination, no capsular swelling.

0=No capsular swelling or agglutination.

It is to be remembered that the results given in table 5 are quantitative Neufeld tests. The antigens were diluted to match as exactly as possible a turbidity standard containing 200 parts per million of silica. To 0.1 cc. of the standardized antigen not more than 0.1 cc. of serum was added. This fact, while it made comparisons of the extent of the cross reactions possible, may account for the failure of some of the diagnostic serums to react with the "odd" type, or to react with agglutination rather than capsular swelling. In the routine Neufeld test, more serum than culture is usually employed (5).

The number of lots of commercial diagnostic serums examined and the number which reacted with the "odd" type are given in table 6. It will be observed that type XXIX and type X serums most frequently crossed with the "odd" type, followed in order by serums of types XX, XXXI, and XI.

TABLE 6.—A summary of the results of tests of commercial diagnostic serums

Types of diagnostic antipneumococcal serums	Number of serums tested	Number of serums causing capsular swelling or complete agglutination of pneumococci of the "odd" type
X.....	11	8
XI.....	16	2
XX.....	9	5
XXIX.....	13	13
XXXI.....	13	3

That the cross was greatest with types XXIX and X was again brought out when concentrated rabbit serums for therapeutic use were tested. The strongest type XXIX and type X serums gave titers of 1:8 and 1:4+, respectively, with the "odd" type. The strongest type XX, type XXXI, and type XI serums caused capsular swelling of the "odd" type but the titer for each serum was less than 1:4.

The relationship between the "odd" type and types X and XXIX, and possibly type XX, was again noted during the course of immunization of rabbits with the multiple reacting strain 32. (See table 7.) Serum obtained from the first preliminary bleeding had a capsular swelling titer of 1:2+ with strain 32, but caused no capsular swelling or agglutination of pneumococci of types X, XI, XX, XXIX, or XXXI. The serum from the second preliminary bleeding gave a titer of 1:8+ with the homologous strain and caused complete agglutination of type X pneumococci and partial agglutination of type XXIX pneumococci. The serum from the third bleeding gave a 1:16+ titer for strain 32 and caused complete agglutination of types X and XXIX pneumococci and partial agglutination of type XX pneumococci. As yet, the maximum titer of the serum of the rabbits under immunization remains 1:16+, and no capsular swelling of pneumococci of types X, XI, XX, XXIX, or XXXI has occurred.

TABLE 7.—*Results of tests for cross reactions on serums of rabbits in the process of immunization with pneumococcus strain 32*

Date of bleedings	Capsular swelling titer with homologous strain	Tests for cross reactions with pneumococci—				
		Type X	Type XI	Type XX	Type XXIX	Type XXXI
Aug. 14, 1940.....	1:2+	0	-----	0	0	0
Aug. 26, 1940.....	1:8+	Agg.	0	0	Partial agg.	0
Sept. 26, 1940.....	1:16+	Agg.	0	Partial agg.	Agg.	0

0= No agglutination or capsular swelling.
Agg.= Agglutination, no capsular swelling.

It may be noted in table 5 that there was a great discrepancy between the capsular swelling titers of the different commercial serums for the respective homologous types of pneumococci and for the multiple reacting strain or strains. This would suggest that the multiple reacting strains were not closely related to the five recognized types. To determine this point, cross absorption tests were made. Strong concentrated rabbit serums of each of the five types, X, XI, XX, XXIX, and XXXI, were absorbed with pneumococci of one of the multiple reacting strains, strain 32, and antipneumococcic rabbit serum for strain 32 was absorbed with pneumococci types X, XX, and XXIX. The results are given in table 8. The titer of each of the

absorbed serums remained the same for the homologous type pneumococcus. Absorption of the commercial serums with strain 32 not only removed the antibody for this strain but for the multiple reacting strains 18, 25, 30, and 31 as well. An antipneumococcal rabbit serum for strain 32 was free of agglutinins for types X, XX, and XXIX after absorption.

TABLE 8.—*Assay of antipneumococcal rabbit serums by the quantitative Neufeld method before and after absorption*

Antipneumococcal rabbit serum	Capsular swelling titers									
	For types					For "odd" strains				
	X	XI	XX	XXIX	XXXI	18	25	30	31	32
Type X, concentrated, Lot T101:										
Before absorption with strain 32...	1:128					1:4+	1:4+	1:4+	1:4+	1:4+
After absorption with strain 32...	1:128					0	0	0	0	0
Type XI, concentrated, Lot T213:										
Before absorption with strain 32...		1:128				<1:4	<1:4	<1:4	<1:4	<1:4
After absorption with strain 32...		1:128				0	0	0	0	0
Type XX, concentrated, Lot T301:										
Before absorption with strain 32...			1:128			<1:4	<1:4	<1:4	<1:4	<1:4
After absorption with strain 32...			1:128			0	0	0	0	0
Type XXIX, concentrated, Lot T401:										
Before absorption with strain 32...				1:128+		1:8	1:8	1:8	1:8	1:8
After absorption with strain 32...				1:128+		0	0	0	0	0
Type XXXI, concentrated, Lot T501:										
Before absorption with strain 32...					1:128	<1:4	<1:4	<1:4	<1:4	<1:4
After absorption with strain 32...					1:128	0	0	0	0	0
Serum 32 not concentrated:										
Before absorption with types X, XX, XXIX...	Agg.	0	Partial agg.	Agg.	0	1:16+	1:16+	1:16+	1:16+	1:16+
After absorption with types X, XX, XXIX...	0		0	0	0	-----	-----	-----	-----	1:16+

0 = No capsular swelling or agglutination.

Agg. = Agglutination, no capsular swelling.

DISCUSSION

This new type of pneumococcus is of interest from two standpoints. Its prevalence in the type incidence survey in California is greater than that of either types X, XX, XXIX, or XXXI, and its cross reactions with four and sometimes five of the present recognized types of serum increase the task of preparing specific pneumococcus typing serums.

It is interesting to compare the percentage of multiple reacting strains of pneumococci, 4.9 percent of the higher types in the California survey, with the figures given by Heffron (3) for types of pneumococci in and around Boston. The incidence of 20 of the recognized higher types of pneumococci among 2,961 strains in the Boston series was less than 4.9 percent each. The incidence for types X, XX, XXIX, and XXXI was 3.0, 3.1, 2.1, and 1.3 percent, respectively.

Whether the incidence of this new type is as great in other parts of the country as it was in California is as yet unknown. While work on these multiple reacting pneumococci was in progress, a report of four strains of pneumococci which reacted with maximal capsular swelling and agglutination with type XXIX serum and partial capsular swelling or agglutination with one or more of the serums of types X, XX, or XXXI, was made by Foster and Shaughnessy (2) in Illinois. No evidence was given to show that these strains do not belong to type XXIX. It is possible, however, that they are identical with our "odd" type.

Every lot of pneumococcus typing serum on the market is tested for cross reactions with all of the recognized heterologous types of pneumococci. In spite of this vigilance it is now evident that confusion with types X, XX, XXIX, XXXI and possibly type XI may occur when this new type is encountered.

Inasmuch as the reactions of the multiple reacting pneumococci with serums of types X, XI, XX, XXIX, and XXXI are only cross reactions and that the Neufeld reaction represents a quantitative combination of antigen and antibody (1) and thus varies with differences in the number of pneumococci as well as differences in the potency of the serums, it is not unusual that in different cultures, under different circumstances, the pneumococci sometimes showed capsular swelling, at other times only agglutination, and at still others no reaction of any kind. This variation in the reactions with the different specific serums as 6 of the multiple reacting strains were isolated and first passed through mice is given in table 9. Although the variation was great it is interesting to note that more positives were obtained with serums of types X and XXIX than with serums of types XXXI and XX. Of the total Neufeld tests performed on the cultures or biological fluids, the preparations which contained pneumococci with completely swollen capsules were, respectively, 48 for type XXIX, 42 for type X, 24 for type XXXI, and 6 for type XX. This is, again, in line with the results of quantitative tests which showed that the greatest cross reactions were with types XXIX and X.

TABLE 9.—*Variation of Neufeld tests for the determination of types during the isolation and first mouse passage of 6 strains of multiple reacting pneumococci*

	Strain 18 tested with serums				Strain 25 tested with serums				Strain 26 tested with serums				Strain 30 tested with serums				Strain 31 tested with serums				Strain 32 tested with serums			
	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e	T X Y D e
Direct test of specimen.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dextrose broth culture.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
First mouse passage:																								
Mouse A:																								
Peritoneal exudate.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brain culture.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heart blood culture.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Second mouse passage:																								
Mouse A:																								
Peritoneal exudate.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brain culture.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heart blood culture.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mouse B:																								
Peritoneal exudate.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brain culture.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heart blood culture.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Third mouse passage:																								
Mouse A:																								
Brain culture.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heart blood culture.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mouse B:																								
Brain culture.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heart blood culture.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mouse C:																								
Brain culture.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heart blood culture.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subculture in dextrose blood broth.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Second subculture in dextrose blood broth.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subculture in dextrose ascites broth.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

± = Partially swollen capsules.
0 = No capsular swelling or agglutination.

+ = Swollen capsules with definite outlines.
agg. = Agglutination, no capsular swelling.

SUMMARY AND CONCLUSIONS

Thirty-three strains of pneumococci were observed to react with agglutination or swollen capsules with two or more of the diagnostic serums of types X, XX, XXIX, and XXXI.

The incidence of these multiple reacting strains in a survey in northern California during the period January 20, 1939, to April 30, 1940, was 4.2 percent of all types. This was a greater incidence than for any of the four types alone.

Five of the strains were carefully studied and evidence is presented showing that the five strains are immunologically identical, and that they represent a distinct type of pneumococcus which crosses not only with types X, XX, XXIX, and XXXI serums but with highly potent type XI serum as well.

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- (4) National Institute of Health, United States Public Health Service, Memorandum "Minimum requirements for pneumococcus typing serums" (Processed) (January 1939).
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COURT DECISION ON PUBLIC HEALTH

Ordinance regarding sanitary privies upheld.—(Alabama Court of Appeals; *Lavender v. City of Tuscaloosa*, 198 So. 459; decided August 6, 1940.) An ordinance of the city of Tuscaloosa provided that persons not having modern toilet facilities connected with the city sewerage system should build and maintain certain specified types of sanitary privies; that such privies should be cleaned by the city scavenger, for which service fees were to be collected by the city from the persons served; and that the failure or refusal to pay such fees when they became due and payable was a criminal offense. A person was convicted in the lower courts of violating this ordinance, the complaint charging the use of a privy upon which the fees for cleaning had not been paid as required by the ordinance.

On appeal to the court of appeals the appellant contended (1) that the ordinance was violative of the Federal Constitution in that it deprived him of the protection of the due process of law clause of the fourteenth amendment, (2) that the ordinance was violative of the Federal and State Constitutions because it failed to define sufficiently the standard of guilt, and (3) that the complaint was vague and

indefinite in that it did not sufficiently inform the defendant of what he was called upon to defend or allow a reasonable joinder of issue thereon. With reference to these contentions the court was of the view that each of them was wholly without merit and said that it clearly appeared that the ordinance itself was a complete answer to, and a refutation of, them.

Another claim made by the appellant was that the ordinance violated the State constitution relative to a citizen's immunity from imprisonment for debt. Regarding this, however, the court said that the immunity from imprisonment for debt contemplated and provided in the constitution had application and was limited to debts arising out of contract and did not extend to and include a fine and costs imposed by the municipality for the willful neglect or refusal to comply with the public duty imposed upon the appellant by the terms of the ordinance upon which the prosecution was rested.

The judgment appealed from was affirmed.

DEATH DURING WEEK ENDED DECEMBER 28, 1940

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Dec. 28, 1940	Correspond- ing week, 1939
Data from 88 large cities of the United States:		
Total deaths.....	8,939	8,901
Average for 3 prior years.....	9,304	
Total deaths, 52 weeks of year.....	436,252	429,419
Deaths under 1 year of age.....	515	475
Average for 3 prior years.....	523	
Deaths under 1 year of age, 52 weeks.....	26,261	25,724
Data from industrial insurance companies:		
Policies in force.....	64,759,968	66,393,376
Number of death claims.....	9,893	10,624
Death claims per 1,000 policies in force, annual rate.....	8.0	8.3
Death claims per 1,000 policies, 52 weeks, annual rate.....	9.5	9.8

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED JANUARY 4, 1941

Summary

For the current week, 77,144 cases of influenza were reported in the United States as compared with 45,475 for the preceding week—the largest numerical increase since the beginning of the present epidemic. Some of these cases, however, may be delayed reports. The western and southern States reported the highest incidence of the disease, with Texas (32,983 cases), Kentucky (9,601), and Arkansas (6,516), recording the largest numbers of cases. Among the North Central groups of States, Kansas, with 2,453 cases (1,607 last week), reported the highest incidence.

The present epidemic of influenza first appeared on the West coast during the latter part of November of last year, and apparently has gradually extended eastward, principally along the southern tier of States, where the reported incidence has been preponderantly the highest. The New England and Middle Atlantic States have so far remained relatively free from the disease.

Influenza, measles, poliomyelitis, and whooping cough were above the 5-year (1935–39) median expectancy for the current week. The number of cases of poliomyelitis increased from 36 to 64, nearly half of which were reported in the Middle Atlantic and East North Central States (11 in New York, 7 in Ohio, and 17 in Wisconsin). No other States reported more than 3 cases.

One case of Rocky Mountain spotted fever was reported in Illinois, 3 cases of tularemia were reported in North Carolina, and 22 cases of endemic typhus fever were reported for the United States as a whole, 9 of which occurred in Georgia and 5 in North Carolina.

For the current week the Bureau of the Census reports 9,251 deaths in 88 major cities of the United States as compared with 8,939 for the preceding week and with a 3-year (1937–39) average of 9,280. As compared with the 3-year average, the influenza epidemic is not reflected in this urban mortality.

Telegraphic morbidity reports from State health officers for the week ended January 4, 1941, and comparison with corresponding week of 1940 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none were reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended		Median 1936-40	Week ended		Median 1936-40	Week ended		Median 1936-40	Week ended		Median 1936-40
	Jan. 4, 1941	Jan. 6, 1940		Jan. 4, 1941	Jan. 6, 1940		Jan. 4, 1941	Jan. 6, 1940		Jan. 4, 1941	Jan. 6, 1940	
NEW ENG.												
Maine.....	0	2	2	40	10	10	37	91	91	2	0	0
New Hampshire.....	0	0	0				11	5	5	0	0	0
Vermont.....	0	0	0	99			24	32	32	0	0	0
Massachusetts.....	1	6	7				384	193	241	3	0	1
Rhode Island.....	0	0	0				0	150	135	0	0	0
Connecticut.....	0	0	2	10	7	14	12	204	143	0	1	2
MID. ATL.												
New York.....	15	12	26	177	116	123	1,471	222	375	1	0	6
New Jersey.....	9	12	17	20	16	16	582	17	24	1	0	3
Pennsylvania.....	16	24	43				1,457	33	83	5	2	2
E. NO. CEN.												
Ohio.....	7	39	39	56	5	7	479	37	37	0	4	4
Indiana.....	13	17	38	236	46	40	33	11	11	0	1	2
Illinois.....	25	32	48	34	18	20	975	26	36	0	4	4
Michigan.....	6	2	11	6			693	0	22	1	0	2
Wisconsin.....	0	0	2	64	49	49	369	155	155	0	0	1
W. NO. CEN.												
Minnesota.....	0	4	5	2	1	1	5	109	66	0	0	0
Iowa.....	18	3	4	43	2	2	132	48	48	1	1	3
Missouri.....	8	11	13	96	3	113	29	4	7	0	1	1
North Dakota.....	12	1	2	172	46	34	10	1	2	0	0	0
South Dakota.....	3	0	0		14	6	2	1	4	0	0	0
Nebraska.....	2	3	3	5	13	10	2	156	39	0	0	1
Kansas.....	3	6	10	2,453	238	16	112	172	9	0	2	2
SO. ATL.												
Delaware.....	1	2	2				17	1	6	0	0	0
Maryland.....	2	4	7	16	24	24	4	1	72	1	0	3
Dist. of Col.....	1	3	7	88		2	2	1	5	0	0	1
Virginia.....	13	22	25	1,752	557		146	32	60	1	1	4
West Virginia.....	7	9	12	54	15	66	43	3	14	0	0	0
North Carolina.....	13	53	43	17	450	24	69	49	49	0	2	2
South Carolina.....	11	26	13	1,581	3,154	720	33	11	11	0	1	1
Georgia.....	5	21	16	788	1,433	133	8	27	27	1	0	0
Florida.....	1	10	13	32	107	5	2	11	11	0	1	3
E. SO. CEN.												
Kentucky.....	4	10	14	9,601	13	13	191	2	60	1	0	7
Tennessee.....	4	12	13	613	143	143	25	39	9	2	0	4
Alabama.....	14	16	16	1,322	974	250	75	25	25	0	0	3
Mississippi.....	5	13	11							2	0	1
W. SO. CEN.												
Arkansas.....	12	17	14	6,516	336	181	16	3	5	0	0	2
Louisiana.....	9	12	12	3,235	15	20	2	1	7	1	0	1
Oklahoma.....	4	14	16	2,248	257	140	1	2	7	0	0	1
Texas.....	24	25	34	32,983	453	453	19	69	51	0	0	1
MOUNTAIN												
Montana.....	2	1	1	893	81	41	2	15	15	0	0	0
Idaho.....	0	1	1	58		3	0	53	53	0	0	0
Wyoming.....	0	0	1	1,651	21		0	6	4	0	1	0
Colorado.....	3	5	9	1,066	163	21	92	37	37	0	0	1
New Mexico.....	0	2	4	220	8	2	55	0	5	0	1	1
Arizona.....	2	9	9	1,099	178	138	52	6	6	2	1	1
Utah.....	1	0	0	2,344	320		13	96	48	0	0	0
Nevada.....				250								
PACIFIC												
Washington.....	0	1	1	1,122			18	570	79	0	0	0
Oregon.....	0	5	2	1,172	281	71	29	66	23	0	0	0
California.....	16	21	81	8,030	163	78	84	90	126	3	1	5
Total.....	292	488	677	77,144	9,630	3,255	7,767	2,883	8,956	28	25	95

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended January 4, 1941, and comparison with corresponding week of 1940 and 5-year median—Con.

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended		Median 1936-40	Week ended		Median 1936-40	Week ended		Median 1936-40	Week ended		Median 1936-40
	Jan. 4, 1941	Jan. 6, 1940		Jan. 4, 1941	Jan. 6, 1940		Jan. 4, 1941	Jan. 6, 1940		Jan. 4, 1941	Jan. 6, 1940	
NEW ENG.												
Maine.....	0	1	0	7	5	19	0	0	0	0	0	0
New Hampshire.....	0	0	0	3	3	13	0	0	0	0	1	0
Vermont.....	0	0	0	10	2	9	0	0	0	0	0	0
Massachusetts.....	0	2	1	120	96	228	0	0	0	1	1	2
Rhode Island.....	0	0	0	4	6	24	0	0	0	0	0	0
Connecticut.....	1	0	0	34	72	68	0	0	0	0	0	1
MID. ATL.												
New York.....	11	4	2	263	290	549	0	0	0	3	4	4
New Jersey.....	0	0	0	144	177	130	0	0	0	0	0	1
Pennsylvania.....	0	2	0	258	370	370	0	0	0	10	9	9
E. NO. CEN.												
Ohio.....	7	1	1	264	393	378	1	3	4	1	7	4
Indiana.....	2	1	0	103	187	190	0	11	15	1	1	1
Illinois.....	3	0	1	309	421	473	3	2	12	6	3	3
Michigan.....	0	0	0	156	116	248	8	0	0	1	0	1
Wisconsin.....	17	6	0	118	141	188	5	4	10	1	2	0
W. NO. CEN.												
Minnesota.....	1	1	1	47	101	131	5	3	9	5	0	0
Iowa.....	1	3	0	45	69	100	1	16	16	1	0	0
Missouri.....	0	0	0	51	57	148	0	1	11	2	1	2
North Dakota.....	0	0	0	5	33	30	1	0	8	0	0	0
South Dakota.....	1	0	0	14	12	31	2	9	5	0	0	0
Nebraska.....	0	0	0	33	35	38	1	3	8	0	0	0
Kansas.....	0	1	1	67	142	167	0	0	11	0	2	2
SO. ATL.												
Delaware.....	0	0	0	12	11	14	0	0	0	0	0	0
Maryland.....	2	0	0	27	56	56	0	0	0	1	2	2
Dist. of Col.....	0	2	0	10	11	18	0	0	0	0	1	0
Virginia.....	3	0	0	46	68	54	0	0	0	1	3	3
West Virginia.....	1	0	0	36	65	64	0	0	0	2	1	2
North Carolina.....	0	1	0	50	72	52	0	0	0	1	0	2
South Carolina.....	0	1	0	17	5	10	0	0	0	0	2	4
Georgia.....	0	1	1	13	42	18	0	0	0	3	3	3
Florida.....	3	0	0	3	14	12	0	0	0	0	2	1
E. SO. CEN.												
Kentucky.....	2	1	1	45	39	63	0	0	0	0	0	5
Tennessee.....	0	0	0	37	34	42	0	0	0	1	1	1
Alabama.....	0	1	0	47	27	14	1	0	0	2	0	1
Mississippi.....	0	0	0	10	6	13	0	0	0	0	2	1
W. SO. CEN.												
Arkansas.....	0	0	0	11	31	20	0	4	2	1	2	2
Louisiana.....	0	1	1	5	18	18	0	0	0	12	1	7
Oklahoma.....	0	0	0	15	28	33	0	8	8	0	5	2
Texas.....	3	0	1	26	45	73	3	0	1	4	4	9
MOUNTAIN												
Montana.....	0	0	0	26	39	37	0	1	13	0	0	0
Idaho.....	0	3	0	5	10	25	0	0	7	0	2	0
Wyoming.....	0	0	0	1	7	18	0	0	4	0	0	0
Colorado.....	0	0	0	30	33	54	8	5	6	1	4	1
New Mexico.....	0	0	0	6	6	16	0	0	0	3	2	3
Arizona.....	0	0	0	5	2	10	0	3	0	0	8	2
Utah.....	0	1	0	7	18	26	0	0	0	0	0	0
Nevada.....												
PACIFIC												
Washington.....	2	1	0	29	39	50	0	1	6	0	2	2
Oregon.....	2	0	0	11	32	41	0	0	5	2	1	1
California.....	2	8	3	78	111	234	1	0	12	4	2	5
Total.....	64	43	21	2,663	3,597	5,024	40	74	276	70	81	99

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended January 4, 1941, and comparison with corresponding week of 1940 and 5-year median—Con.

Division and State	Whooping cough		Division and State	Whooping cough	
	Week ended			Week ended	
	Jan. 4, 1941	Jan. 6, 1940		Jan. 4, 1941	Jan. 6, 1940
NEW ENG.			SO. ATL.—CON.		
Maine.....	50	41	South Carolina.....	55	7
New Hampshire.....	5	4	Georgia ⁴	22	12
Vermont.....	15	54	Florida ⁴	6	2
Massachusetts.....	260	104			
Rhode Island.....	11	21	E. SO. CEN.		
Connecticut.....	71	59	Kentucky.....	22	15
MID. ATL.			Tennessee.....	17	19
New York.....	375	389	Alabama ⁴	18	8
New Jersey.....	103	89	Mississippi ¹		
Pennsylvania.....	524	216	W. SO. CEN.		
E. NO. CEN.			Arkansas.....	10	1
Ohio.....	245	132	Louisiana.....	4	2
Indiana.....	19	29	Oklahoma.....	26	3
Illinois ¹	145	129	Texas ⁴	112	55
Michigan ¹	198	25			
Wisconsin.....	98	103	MOUNTAIN		
W. NO. CEN.			Montana.....	13	2
Minnesota.....	39	34	Idaho.....	3	6
Iowa.....	9	4	Wyoming.....	8	8
Missouri.....	17	12	Colorado.....	23	27
North Dakota.....	16	4	New Mexico.....	15	7
South Dakota.....	1	0	Arizona.....	20	2
Nebraska.....	8	64	Utah ¹	32	52
Kansas.....	85	20	Nevada.....		
SO. ATL.			PACIFIC		
Delaware.....	14	13	Washington.....	43	25
Maryland ¹	59	46	Oregon.....	6	52
Dist. of Col.....	13	7	California.....	154	91
Virginia ⁴	106	51			
West Virginia ¹	39	8	Total.....	3,326	2,077
North Carolina ⁴	192	32			

¹ New York City only.

² Rocky Mountain spotted fever, week ended Jan. 4, 1941, Illinois, 1 case.

³ Period ended earlier than Saturday.

⁴ Typhus fever, week ended Jan. 4, 1941, 22 cases, as follows: Virginia, 2; North Carolina, 5; Georgia, 9; Florida, 3; Alabama, 1; Mississippi, 1; Texas, 1.

WEEKLY REPORTS FROM CITIES

City reports for week ended December 21, 1940

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table.

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small- pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
Data for 90 cities: 5-year average.....	171	344	75	1,106	751	1,264	19	343	23	981	-----
Current week ¹	60	4,979	51	2,508	457	897	5	310	24	1,266	-----
Maine:											
Portland.....	0	-----	0	2	1	1	0	0	1	7	20
New Hampshire:											
Concord.....	0	-----	0	0	1	0	0	0	0	0	13
Manchester.....	0	-----	0	0	1	2	0	0	0	0	16
Nashua.....	0	-----	0	0	0	0	0	0	0	0	5
Vermont:											
Barre.....	0	-----	0	0	0	0	0	0	0	0	1
Burlington.....	0	-----	0	0	0	0	0	0	0	0	9
Rutland.....	0	-----	0	0	1	0	0	0	0	0	4
Massachusetts:											
Boston.....	0	-----	0	69	21	42	0	9	0	132	232
Fall River.....	1	-----	0	0	1	11	0	0	0	20	14
Springfield.....	0	-----	0	1	0	9	0	0	0	2	22
Worcester.....	0	-----	0	69	5	7	0	0	0	0	63
Rhode Island:											
Pawtucket.....	0	-----	0	0	0	1	0	0	0	0	16
Providence.....	0	1	0	0	2	2	0	2	0	4	61
Connecticut:											
Bridgeport.....	0	-----	0	0	0	1	0	0	0	2	22
Hartford.....	0	-----	0	0	4	3	0	0	0	5	44
New Haven.....	0	-----	0	0	1	9	0	0	0	24	40
New York:											
Buffalo.....	0	-----	0	41	7	18	0	7	0	37	118
New York.....	17	41	0	753	64	142	0	68	6	128	1,485
Rochester.....	0	-----	0	2	2	1	0	2	2	7	68
Syracuse.....	0	-----	0	0	3	1	0	0	0	13	49
New Jersey:											
Camden.....	0	-----	1	57	2	9	0	0	0	1	30
Newark.....	0	-----	0	55	2	21	0	2	0	18	85
Trenton.....	0	-----	0	3	2	26	0	1	0	1	26
Pennsylvania:											
Philadelphia.....	1	4	2	370	26	67	0	16	1	129	491
Pittsburgh.....	2	3	1	1	13	17	0	6	1	82	155
Reading.....	0	-----	0	23	1	4	0	4	0	16	32
Seranton.....	0	-----	-----	1	-----	1	0	-----	0	0	-----
Ohio:											
Cincinnati.....	0	20	5	32	11	20	0	5	0	57	196
Cleveland.....	1	-----	0	0	4	8	0	0	0	12	92
Columbus.....	0	-----	1	2	5	20	0	2	0	11	89
Toledo.....	0	3	-----	-----	-----	-----	-----	-----	-----	-----	-----
Indiana:											
Anderson.....	2	-----	0	0	3	1	0	0	0	0	8
Fort Wayne.....	0	-----	0	5	5	1	0	2	0	0	23
Indianapolis.....	2	-----	1	4	7	31	0	1	0	2	100
Muncie.....	0	-----	0	0	4	5	0	1	0	0	10
South Bend.....	0	-----	0	0	2	0	0	0	0	0	17
Terre Haute.....	1	-----	1	0	2	0	1	0	0	0	23
Illinois:											
Alton.....	0	-----	0	0	0	5	0	0	0	0	6
Chicago.....	4	7	1	419	29	126	0	27	3	88	665
Elgin.....	0	1	0	1	4	0	0	0	0	0	19
Moline.....	0	-----	0	0	0	1	0	0	0	0	8
Springfield.....	0	1	0	1	4	1	0	0	0	1	22
Michigan:											
Detroit.....	3	1	0	434	26	88	0	14	0	166	307
Flint.....	0	-----	0	12	3	0	0	1	0	9	27
Grand Rapids.....	0	-----	0	5	1	10	0	0	0	14	43
Wisconsin:											
Kenosha.....	0	-----	0	0	0	1	0	0	0	0	11
Madison.....	0	-----	0	1	0	2	0	0	0	1	16
Milwaukee.....	0	-----	0	14	0	14	0	5	0	28	56
Racine.....	0	-----	0	1	0	1	0	0	0	0	10
Superior.....	0	-----	0	1	0	3	0	0	0	6	6

¹ Figures for Cincinnati, Shreveport, and Tacoma estimated; reports not received.

City reports for week ended December 21, 1940—Continued

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small- pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
Minnesota:											
Duluth.....	0	-----	0	0	1	2	2	0	0	5	28
Minneapolis.....	0	-----	0	2	2	24	0	0	0	12	106
St. Paul.....	0	-----	0	1	0	9	0	0	0	19	63
Iowa:											
Cedar Rapids.....	0	-----	-----	1	-----	4	0	-----	0	0	-----
Davenport.....	0	-----	-----	0	-----	4	0	-----	0	0	-----
Des Moines.....	1	-----	0	2	0	11	0	0	0	1	33
Sioux City.....	0	-----	-----	0	-----	4	1	-----	0	5	-----
Waterloo.....	0	-----	-----	1	-----	3	0	-----	0	0	-----
Missouri:											
Kansas City.....	0	-----	1	3	6	7	1	10	0	20	91
St. Joseph.....	0	-----	1	0	10	1	0	1	0	0	36
St. Louis.....	5	5	4	3	18	27	0	5	1	13	210
North Dakota:											
Fargo.....	0	-----	0	0	0	3	0	0	0	2	6
Grand Forks.....	0	-----	-----	0	-----	0	0	-----	0	0	-----
Minot.....	0	-----	0	0	0	1	0	0	0	0	10
South Dakota:											
Aberdeen.....	0	-----	-----	0	-----	1	0	-----	0	4	-----
Sioux Falls.....	0	-----	-----	0	-----	0	0	-----	0	0	8
Nebraska:											
Lincoln.....	0	-----	-----	2	-----	4	0	-----	0	1	-----
Omaha.....	0	-----	0	1	4	2	1	3	0	1	57
Kansas:											
Lawrence.....	0	6	0	2	0	0	0	0	0	0	4
Topeka.....	0	1	0	0	3	3	0	0	0	3	11
Wichita.....	1	118	0	1	3	3	0	1	0	7	26
Delaware:											
Wilmington.....	2	-----	0	6	5	4	0	1	0	4	36
Maryland:											
Baltimore.....	0	2	1	0	4	17	0	17	0	45	232
Cumberland.....	0	-----	0	0	2	0	0	0	0	0	11
Frederick.....	0	-----	0	0	0	1	0	0	0	0	3
Dist. of Col.:											
Washington.....	2	3	2	3	10	8	0	7	1	14	172
Virginia:											
Lynchburg.....	1	-----	0	0	0	0	0	0	0	2	6
Norfolk.....	0	34	0	2	1	0	0	0	0	3	37
Richmond.....	1	-----	0	5	4	4	0	1	0	0	58
Roanoke.....	0	-----	0	8	3	2	0	0	0	0	13
West Virginia:											
Charleston.....	0	1	0	0	1	1	0	1	0	0	11
Huntington.....	0	-----	-----	0	-----	0	0	-----	0	0	-----
Wheeling.....	1	-----	-----	0	-----	1	0	-----	0	7	-----
North Carolina:											
Gastonia.....	0	-----	-----	0	-----	0	0	-----	0	0	-----
Raleigh.....	0	-----	0	0	1	0	0	0	0	0	17
Wilmington.....	0	-----	0	0	0	2	0	1	1	1	5
Winston-Salem.....	0	-----	0	0	1	5	0	1	0	42	17
South Carolina:											
Charleston.....	0	45	0	15	1	1	0	2	0	0	19
Florence.....	0	4	0	0	2	0	0	1	0	0	9
Greenville.....	0	-----	0	0	3	0	0	1	0	2	29
Georgia:											
Atlanta.....	1	17	0	1	4	2	0	7	0	2	80
Brunswick.....	0	-----	0	0	0	0	0	0	0	1	4
Savannah.....	0	-----	0	0	1	0	0	3	0	0	31
Florida:											
Miami.....	0	1	1	3	4	0	0	1	0	0	45
Tampa.....	0	1	0	0	1	2	0	1	0	0	23
Kentucky:											
Ashland.....	0	-----	0	0	2	0	0	0	0	0	5
Covington.....	0	-----	0	0	0	2	0	1	0	0	14
Lexington.....	0	-----	0	96	0	1	0	0	0	12	11
Louisville.....	0	-----	0	2	11	12	0	2	0	8	87
Tennessee:											
Knoxville.....	0	-----	0	0	2	2	0	0	1	0	20
Memphis.....	0	1	1	14	1	7	0	4	0	1	81
Nashville.....	1	-----	0	1	3	8	0	0	0	10	45
Alabama:											
Birmingham.....	0	7	0	2	4	1	0	3	0	5	57
Mobile.....	1	8	0	0	1	0	0	2	0	0	24
Montgomery.....	1	-----	-----	0	-----	4	0	-----	0	0	-----

City reports for week ended December 21, 1940—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Arkansas:											
Fort Smith.....	0	32		1		1	0		0	0	
Little Rock.....	0	114	0	0	5	0	0	0	0	0	21
Louisiana:											
Lake Charles.....	0		0	0	3	1	0	1	0	0	8
New Orleans.....	0	56	2	1	17	1	0	7	6	3	130
Shreveport.....											
Oklahoma:											
Oklahoma City.....	0	132	1	1	2	0	0	0	0	2	34
Tulsa.....	0		0	0	5	0	0	1	0	3	23
Texas:											
Dallas.....	0	1	1	1	3	3	0	1	0	0	67
Fort Worth.....	0		0	5	3	3	0	2	0	0	37
Galveston.....	0		0	0	2	0	0	0	0	0	19
Houston.....	1	39	0	0	5	2	0	4	1	2	72
San Antonio.....	2	446	4	0	8	1	0	12	0	0	79
Montana:											
Billings.....	0	2	0	0	0	0	0	0	0	0	5
Great Falls.....	0	15	1	0	0	3	0	0	0	0	7
Helena.....	0	5	0	0	0	0	0	0	0	0	2
Missoula.....	0	3	0	0	2	2	0	0	0	0	7
Idaho:											
Boise.....	0		0	0	2	0	0	0	0	0	9
Colorado:											
Colorado Springs.....	0		0	0	0	3	0	3	0	0	13
Denver.....	2	105	3	16	3	2	0	2	0	16	95
Pueblo.....	0		0	38	0	2	0	0	0	5	13
Utah:											
Salt Lake City.....	0		2	2	3	0	0	0	0	6	33
Washington:											
Seattle.....	4	17	4	1	10	1	0	3	0	2	122
Spokane.....	0	324	1	0	3	5	0	0	0	1	30
Tacoma.....											
Oregon:											
Portland.....	0	585	2	0	4	3	0	3	0	1	91
Salem.....	0	40		0		0	0		0	4	
California:											
Los Angeles.....	0	2,999	9	2	17	13	0	21	0	26	441
Sacramento.....	2	123	1	1	9	3	0	4	0	1	50
San Francisco.....	0	443	1	0	1	2	0	7	0	14	218

State and city	Meningitis, meningococcus		Polio-myelitis cases	State and city	Meningitis, meningococcus		Polio-myelitis cases
	Cases	Deaths			Cases	Deaths	
Massachusetts:				Maryland:			
Boston.....	1	0	0	Baltimore.....	0	0	1
Worcester.....	1	0	0	District of Columbia:			
New York:				Washington.....	1	0	0
Buffalo.....	1	2	0	Virginia:			
New York.....	2	0	1	Norfolk.....	1	0	0
Pennsylvania:				Richmond.....	0	0	1
Philadelphia.....	1	0	0	South Carolina:			
Indiana:				Florence.....	0	1	0
Indianapolis.....	0	0	1	Tennessee:			
Michigan:				Knoxville.....	1	0	0
Detroit.....	0	0	1	Louisiana:			
Wisconsin:				New Orleans.....	0	0	2
Milwaukee.....	0	0	1	California:			
Delaware:				Los Angeles.....	0	1	0
Wilmington.....	0	0	1				

Encephalitis, epidemic or lethargic.—Cases: Newark, 1; Philadelphia, 1; Great Falls, 1.

Pellagra.—Cases: Charleston, S. C., 2.

Typhus fever.—Cases: Florence, 2; Tampa, 1; Mobile, 3; Montgomery, 3; Fort Worth, 1; Houston, 2; Los Angeles, 1.

FOREIGN REPORTS

CANADA

Vital statistics—First quarter 1940.—The Bureau of Statistics of Canada has published the following preliminary statistics for the first quarter of 1940. The rates are computed on an annual basis. There were 19.7 live births per 1,000 population during the first quarter of 1940 as compared with 20.5 during the first quarter of 1939. The death rate was 9.9 per 1,000 population for the first quarter of 1940 and 11.0 for the same quarter of 1939. The infant mortality rate was 63 per 1,000 live births in this quarter as compared with 72 for the same quarter of 1939. The maternal death rate was 4.3 per 1,000 live births for the first quarter of 1940, and 4.4 for the same quarter of 1939.

The accompanying tables give the numbers of births, deaths, and marriages, by Provinces, for the first quarter of 1940 and deaths by causes in Canada for the first quarter of 1940 and the corresponding quarter of 1939.

Number of births, deaths, and marriages, first quarter, 1940

Province	Live births	Deaths (exclusive of still-births)	Deaths under 1 year of age	Maternal deaths	Marriages
Canada ¹	55,617	27,984	3,523	238	17,079
Prince Edward Island.....	491	281	43	9	117
Nova Scotia.....	2,765	1,583	236	13	989
New Brunswick.....	2,682	1,258	230	13	675
Quebec.....	19,266	8,385	1,531	90	4,285
Ontario.....	16,126	9,947	745	68	6,014
Manitoba.....	3,336	1,604	198	17	1,261
Saskatchewan.....	4,237	1,620	245	20	917
Alberta.....	3,635	1,258	175	11	1,336
British Columbia.....	3,079	2,048	120	10	1,485

¹ Exclusive of Yukon and the Northwest Territories.

Deaths, by cause, first quarter 1940

Cause of death	Canada ¹ (first quarter)		Province								
	1939	1940	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
Automobile accidents.....	180	192	—	12	10	30	97	8	9	10	16
Cancer.....	3,071	3,189	22	173	118	875	1,176	196	196	157	276
Cerebral hemorrhage, cerebral embolism, and thrombosis.....	598	608	9	59	46	123	261	21	27	26	36
Diarrhea and enteritis.....	374	346	3	7	15	214	47	19	19	14	8
Diphtheria.....	105	51	—	1	6	32	3	1	5	2	1
Diseases of the arteries.....	3,030	3,149	29	140	122	618	1,550	174	146	116	254
Diseases of the heart.....	5,102	5,259	49	253	193	1,234	2,298	312	273	222	425
Homicides.....	26	28	—	1	—	3	12	3	5	2	2
Influenza.....	2,054	888	6	80	23	327	217	56	82	51	46
Measles.....	61	49	—	1	—	23	9	5	9	1	1
Nephritis.....	1,834	1,721	12	77	51	813	512	54	71	38	93
Pneumonia.....	2,660	1,883	35	123	115	631	605	128	129	97	130
Pollomyelitis.....	4	6	—	—	—	4	1	—	—	—	1
Puerperal causes.....	251	238	—	9	13	90	68	17	20	11	10
Scarlet fever.....	68	41	—	1	—	21	13	1	3	2	—
Smallpox.....	1	—	—	—	—	—	—	—	—	—	—
Suicides.....	186	183	1	4	8	31	71	17	14	14	23
Tuberculosis.....	1,568	1,442	21	95	79	649	245	92	55	67	139
Typhoid fever.....	38	34	1	—	2	25	2	2	2	—	—
Other violent deaths.....	942	899	10	58	44	172	361	44	45	54	111
Other specified causes.....	7,480	73	449	362	2,476	2,365	436	488	359	472	—
Unspecified or ill-defined causes.....	151	10	16	33	46	12	4	7	12	11	—
Whooping cough.....	141	147	—	24	18	48	22	14	15	3	3

¹ Exclusive of Yukon and the Northwest Territories.

CUBA

Habana—Communicable diseases—4 weeks ended November 16, 1940.—During the 4 weeks ended November 16, 1940, certain communicable diseases were reported in Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Diphtheria.....	16	—	Tuberculosis.....	1	—
Malaria.....	7	3	Typhoid fever.....	51	6
Scarlet fever.....	1	—			

GREAT BRITAIN

England and Wales—Infectious diseases—13 weeks ended March 30, 1940.—During the 13 weeks ended March 30, 1940, cases of certain infectious diseases were reported in England and Wales as follows:

Disease	Cases	Disease	Cases
Diphtheria.....	9,041	Puerperal pyrexia.....	2,118
Dysentery.....	532	Scarlet fever.....	13,382
Ophthalmia neonatorum.....	1,007	Typhoid and paratyphoid fever.....	192
Pneumonia.....	23,417		

England and Wales—Vital statistics—First quarter 1940.—The following vital statistics for the first quarter of 1940 for England and Wales are taken from the Quarterly Return of Births, Deaths, and Marriages, issued by the Registrar General, and are provisional:

	Number	Annual rate per 1,000 population		Number	Annual rate per 1,000 population
Live births.....	154,336	15.0	Deaths from—Continued.		
Stillbirths.....	6,198	.61	Influenza.....	10,499	1.04
Deaths, all causes.....	204,349	20.3	Measles.....	149	.01
Deaths under 1 year of age.....	11,876	1.77	Scarlet fever.....	57	.01
Deaths from:			Typhoid and paratyphoid fever.....	24	.00
Diarrhea and enteritis (under 2 years of age).....	687	4.5	Whooping cough.....	167	.02
Diphtheria.....	556	.05			

¹ Per 1,000 live births.

England and Wales—Vital statistics—Year 1939.—The following vital statistics for the year 1939 for England and Wales are taken from the Quarterly Return of Births, Deaths, and Marriages, issued by the Registrar General, and are provisional:

	Number of deaths	Rate per 1,000 population		Number of deaths	Rate per 1,000 population
Diarrhea and enteritis (under 2 years of age).....	2,812	4.5	Scarlet fever.....	216	.01
Diphtheria.....	2,171	.05	Typhoid and paratyphoid fever.....	113	.00
Influenza.....	9,033	.22	Whooping cough.....	1,273	.03
Measles.....	309	.01			

SCOTLAND

Vital statistics—Quarter ended September 30, 1940.—Following are provisional vital statistics for Scotland for the quarter ended September 30, 1940:

	Number	Rate per 1,000 population		Number	Rate per 1,000 population
Marriages.....	15,625	12.4	Deaths from—Continued.		
Births.....	21,152	16.7	Lethargic encephalitis.....	17	-----
Deaths.....	14,208	11.2	Malaria.....	5	-----
Deaths under 1 year of age.....	1,215	1.57	Measles.....	97	0.08
Deaths from:			Nephritis, acute and chronic.....	304	-----
Appendicitis.....	72	-----	Pneumonia (all forms).....	446	.35
Cancer.....	2,057	1.63	Poliomyelitis.....	6	-----
Cerebral hemorrhage and apoplexy.....	971	-----	Puerperal sepsis.....	17	-----
Cerebrospinal fever.....	70	.06	Scarlet fever.....	10	.01
Cirrhosis of the liver.....	40	-----	Senility.....	432	-----
Diabetes mellitus.....	193	-----	Suicide.....	103	-----
Diarrhea and enteritis (under 2 years of age).....	191	-----	Syphilis.....	19	-----
Diphtheria.....	160	.13	Tetanus.....	4	-----
Dysentery.....	6	-----	Tuberculosis (all forms).....	836	.66
Erysipelas.....	9	-----	Typhoid and paratyphoid fever.....	5	-----
Heart disease.....	3,246	-----	Other violence.....	921	.73
Homicide.....	6	-----	Whooping cough.....	51	.04
Influenza.....	24	.02			

¹ Per 1,000 live births.

SWITZERLAND

Notifiable diseases—August 1940.—During the month of August 1940, cases of certain notifiable diseases were reported in Switzerland as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis.....	22	Paratyphoid fever.....	25
Chickenpox.....	50	Poliomyelitis.....	46
Diphtheria and croup.....	28	Scarlet fever.....	233
German measles.....	8	Tuberculosis.....	225
Influenza.....	9	Typhoid fever.....	7
Malaria.....	1	Undulant fever.....	8
Measles.....	148	Whooping cough.....	168
Mumps.....	10		

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—A cumulative table giving current information regarding the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS of December 27, 1940, pages 2408-2412. A similar table will appear in future issues of the PUBLIC HEALTH REPORTS for the last Friday of each month.

Cholera

India—Rangoon.—During the week ended December 14, 1940, 10 cases of cholera were reported in Rangoon, India.

Plague

Argentina.—During the month of November 1940, plague was reported in Argentina as follows: Cordoba Province, 4 cases, 3 deaths; Santiago del Estero Province, 1 case, 1 death.

Azores Islands—St. Michael—Faja de Cima.—During the 4 weeks ended November 2, 1940, 1 case of bubonic plague was reported at Faja de Cima, St. Michael, Azores Islands.

Yellow Fever

Colombia—Santander Department.—During the month of September 1940, 1 case of yellow fever with 1 death was reported in Santander Department, Colombia.

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